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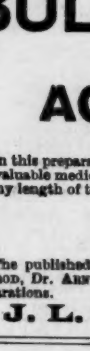

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Presidential Address

Delivered at the Seventy-sixth Annual Meeting of the British Medical Association,

BY SIMEON SNELL, F.R.C.S. EDIN.,

OPHTHALMIC SURGEON, ROYAL INFIRMARY, SHEFFIELD; PROFESSOR OF OPHTHALMOLOGY IN THE UNIVERSITY OF SHEFFIELD.

MY first and most pleasing duty is to thank you for your kindness in placing me in the honourable and distinguished position of President of this great Association. To have one's name enrolled amongst the 75 eminent men who have preceded me in this office is indeed an honour which naturally can only come to few of the many thousands who are numbered in the British Medical Association. It next devolves upon me to offer you a most cordial welcome, one and all, to this city. To you, residents in other parts of these islands, we, the medical practitioners of Sheffield, extend a hearty greeting; to our fellow-subjects from many distant lands, but under the same flag, we accord a motherland welcome; while to our guests, whether they be our kinsmen from across the Atlantic or others from the various European States, we extend the right hand of fellowship. All are welcome to the city and to partake of the scientific fare and the hospitalities which, with the help of our citizen friends, it has been our happiness to prepare.

The present is the third annual meeting of the Association in this city. At the first meeting, in 1845, the President-elect retired the day before, because, as he said, he was not in accord with the medical politics of the Association, whilst the next, in 1876,[1] was held at short notice in consequence of the abandonment of the meeting, owing to local differences, in another town which had been selected. To-day, far-reaching questions of great importance are agitating the Association. Whatever be the outcome, let us hope that this, the greatest Association the members of any profession have ever seen, may in no measure depart from the high traditions it has ever set before it, but rather increase its usefulness to the profession, and if it does this it will be for the benefit of the public.

The first meeting was the thirteenth of the Association, which was then the Provincial Medical and Surgical Association, and was held in July, 1845. Dr. Charles F. Favell was the President and Dr. F. Branson the secretary. Such, however, is destiny, that the president only lived to the next year, passing away at the early age of 42, whereas Dr. Branson attained the age of 82 and died only 12 years since. Dr. Favell was the representative of a medical family already then well known and respected for generations in the city. His nephew, William F. Favell, delivered the Address in Surgery in this city in 1876, and another nephew is worthily presiding over the Gynæcological Section at this meeting. It is interesting to note that in his farewell address (1845) the retiring President, Dr. Robertson of Northampton, predicted a long and prosperous career for this Association. These were his words:

> Our Association, I trust, is destined to experience a very long career of existence, increasing from year to year, till it reaches the full stature and importance of a national institution. May I be permitted to look at it in imagination through the long vista of distant futurity, and to apostrophise it in the well-known words of one of our classical poets?
>
> "O! while along the stream of time thy name
> Expanded flies, and gathers all its fame;
> Say, shall my little bark attendant sail,
> Pursue the triumph, and partake the gale?"
> —POPE: "Moral Essay."

How true has this prophetic vision become! These words were spoken in this city 63 years ago at a time when the Provincial Medical and Surgical Association, as it was then named, numbered less than 1900 members, whereas the British Medical Association of 1908 numbers more than 22,000 members, and its far-reaching character is such that it is limited only by the confines of the British Empire, serving not only as a bond between medical brethren in different parts but as a link in the chain of imperial unity. To-day we have gladly welcomed as our guests numerous representatives from many different climes and many distant countries, all members of this great Association, and all owing allegiance to the same Sovereign. At the second meeting, in 1876, the British Medical Association had increased its membership to 7000 and the population of this city was 260,000, it having more than doubled the number of its inhabitants since the previous meeting in 1845.

Let me here say something of the changes which have come over Sheffield. The town has become a city and is shortly to be the centre of an episcopal diocese. The main streets have given place to others, wide and open; many very fine buildings worthy of the great city have arisen, notably the town hall and the university. Hospital extension has gone apace, no less a sum than more than £250,000 having been spent at the four institutions,[2] either in alterations and extensions or on the erection of new buildings. The large works of world-wide reputation have become more extensive and have done more than ever to maintain the pre-eminence of the city as the metropolis of the steel industry. The population has reached to nearly half a million and a healthy public spirit has been abroad making Sheffield one of the most progressive and prosperous cities of the kingdom. It has been fortunate in its public men, in their character and ability, from whichever side of political life they have been drawn; and fortunate, too, that they, when an undertaking has been manifestly for the public good, have been enabled to sink their differences and work together for the general weal.

The Sheffield School of Medicine ranks among the oldest of similar institutions in this country. Shortly, its history is as follows. An active and busy practitioner in the early part of the last century, Mr. Hall Overend, had collected together a museum, which for those days must have been a very extensive one. By 1827 his ideas, with the assistance of his son, Wilson Overend, and others, had developed into a school of anatomy and surgery, and a complete syllabus of lectures was issued. In 1835 (Jan. 26th) a riot occurred and the school was burnt down, the populace believing, not without some reason, that resurrected bodies were therein. Shortly after the foundation of this Overend school another medical institution was promoted on more ambitious lines, and on July 9th, 1828, the foundation stone was laid by Dr. (afterwards Sir) Arnold Knight. In the same month of the next year (July 2nd) this school was opened with an introductory address by the same eminent physician. At this period the population of Sheffield did not number 70,000, and the students that the promoters could expect were the apprentices in the town and neighbourhood. A local directory of the time gives eight physicians and 33 surgeons as residing in the town, but some of these were not, I think, *regular* practitioners. It was, however, a time of considerable activity in medical quarters. A medical and surgical society had been established in 1819 and a medical library two years earlier. There is evidence also that though the profession was few in numbers it yet contained many active and able men. The medical school, founded in 1828 by Sir Arnold Knight, pursued an uninterrupted career until three years ago it became the Medical Faculty of the University. Through good fortune or ill-fortune the work of medical education was carried on in this city. At no time were the services of its lecturers pecuniarily recompensed, but such an *esprit de corps* was established that it may safely be asserted, the exceptions being so insignificant, that no medical practitioner has occupied a prominent position who, at one time or another in his career, has not rendered more or less service to the medical school. Up to 1889 the original building was still occupied. Then the school was removed to a new building, much more commodious, which served its purpose until the present University buildings were erected, the medical department of University College—as it had been for some years—becoming the Medical Faculty of the University. The last few years have seen professorships in anatomy, physiology, and pathology successfully founded and held by men devoting their energies entirely to those studies, whilst the primary subjects of physics, chemistry, and biology have been taught by the University science professors. Holding our meetings in these buildings you

[1] Dr. Bartolomé was President at this meeting; he died in 1889. The local secretaries were Mr. Arthur Jackson—he died in 1895—and Dr. Keeling, who is still living.

[2] The four institutions are: (1) Royal Infirmary (255 beds), large alterations and extensions; (2) Royal Hospital (165 beds), rebuilding; (3) Jessop Hospital for Women (80 beds), rebuilt and extensions; and (4) Children's Hospital (40 beds) new buildings.

will have ample opportunity of becoming familiar with the advantages they afford for teaching purposes. What is true of our department is true of all, and it has been fortunate that those responsible for the management of the University have recognised that fit and proper equipment is an important part of endowment.

The subject of modern universities has been discussed over and over again and it suffices to say that the university movement in Sheffield was a popular one in which all classes participated. The medical profession rendered its share in this movement. It is pleasing to note that, whilst the oldest of the faculties, the medical, has renewed its youth and activity, and whilst it must of necessity be always smaller than such faculties as that of applied science, admittedly pre-eminent for its special features amongst similar institutions, and can appeal, therefore, to immense numbers from all parts, yet with its large clinical opportunities and the excellent equipment of its laboratories it will continue to be a highly important faculty in the most modern, but not the least progressive, of the universities.

Sheffield may perhaps not inappropriately be called the cradle of the study of industrial diseases. It was in 1830 that Sir Arnold Knight, one of the physicians to the Royal (then General) Infirmary, published his paper[3] calling attention to the high mortality from lung diseases among grinders, but he had previously, in 1819, before the Medical and Surgical Society, read a paper on the same subject,[4] in which he showed that whilst there were several thousands engaged in that employment very few of them attained the age of 45 years, and fewer still survived it, but it was only of late years that this complaint had become so frequent among the grinders. He then went on as follows:—

> Until the beginning of the last century (eighteenth) grinding was not a distinct branch of business, but was performed by men who were also engaged in various other departments of the cutlery trade, and who were consequently exposed but seldom, and then only for a short time, to the injurious effects of the grinding wheel. Up to that time also the grinder's asthma was not known as a disease peculiar to the grinder; then, however, an important change took place in the division of labour, and grinding became the sole employment of the grinder. A few years afterwards, about the middle of the same century, several grinders were observed to die of complaints, nearly similar; the attention of their companions was aroused, and they found the complaint was peculiar to themselves; still, however, it was far from being general among them, for they worked in large, lofty rooms, which did not contain more than six or eight stones, were open to the roof, without windows, and generally with the cogwheel in the inside; thus such a complete circulation of air was effected that the small quantity of dust raised from these few stones was soon carried away. Moreover, for several months during each summer they could not work more than four or five hours a day owing to a scarcity of water.[5] About thirty years ago (1786) the steam engine was first adapted to the purposes of grinding; and then a very important era arrived in the annals of the grinder. He now worked in a small low room where there were ten or twelve stones; the doors and windows were kept almost constantly closed; a great quantity of dust was necessarily evolved from so many stones, and there was scarcely any circulation of air to carry it away. Unfortunately, the steam engine, unlike the stream which formerly supplied his wheel, allowed him no season of relaxation for the recovery of his health. He worked ten or eleven hours a day on an average. If, then, the grinder's asthma were a disease of not infrequent occurrence before, it is probable that its frequency would have been much increased now. Such, indeed, was the fact; and it is at the present time become so general that out of 2500 grinders there are not 35 who have arrived at the age of 50 years, and perhaps not double that number who have even reached the age of 45. There are above 80 fork-grinders exclusive of boys, and I am informed that there is not a single individual amongst them 36 years old.

The healthy conditions under which employments were carried on in Sheffield in the middle of the eighteenth century, as portrayed by Sir Arnold Knight, receives curious corroboration from a writer in 1769,[6] a medical practitioner resident in this city—namely, Dr. Buchan, the author of "Domestic Medicine," a widely circulated work, in which he says:—

> It may seem romantic to recommend gardening to manufacturers in great towns; but observation proves that the plan is very practicable. In the town of Sheffield, in Yorkshire, where the great iron manufacture is carried on, there is hardly a journeyman cutler who does not occupy a piece of ground which he cultivates as a garden. This practice has salutary effects. It not only induces these people to take exercise without-doors, but also to eat many greens, roots, &c., of their own produce which they would not think of purchasing. There seems to be no reason why manufacturers in any other town in Great Britain should not follow this example.[7]

In 1843 Dr. Calvert Holland, another physician to the infirmary, published in book form[8] his extensive and elaborate observations on the same subject, which he had carried on for several years, setting forth clearly the mechanical part the dust and metallic particles played in the production of the disease. To Dr. Holland belongs the merit of recognising the kind of ventilating apparatus required and of urging its adoption; the skill of engineers has since his day given practicability to his suggestion.[9] Dr. Holland was a most intelligent observer and even in these days would be regarded as an extensive as well as a versatile writer. In 1843 he made careful inquiries into each branch of labour followed in Sheffield, noting the social conditions, ages at which work was commenced, educational attainments, scale of wages, and relative mortality, &c. His results showed that each principal department of the Sheffield trade had its own special health conditions and rate of mortality. The one pre-eminent for its destructiveness to life was fork-grinding. The grinder accepted his calling and became indifferent to the future, regarding his fate as an unavoidable incident. This is illustrated in the following lines of Sheffield's own bard, Ebenezer Elliott, well known as the Corn Law Rhymer:—

> "There draws the grinder his laborious breath,
> There, coughing, at his deadly trade, he bends.
> Born to die young, he fears nor man nor death;
> Scorning the future, what he earns he spends:
> Debauch and riot are his bosom friends."
> —*Village Patriarch*, Book v., 4.[10]

The President, Dr. C. F. Favell, of this Association, when it met in this city in 1845, treated, too, of grinders' phthisis in his presidential address. Dr. J. C. Hall, in 1857, discussed the same subject[11] extensively, and so have others, many of whom are still living, until now even, when Dr. Scurfield, medical officer of health in the present year, states that were it not for industrial phthisis the mortality from consumption would be less in Sheffield than in other large towns, and in his last annual report it is shown that 118 men died, including grinders, of course, owing to bad industrial conditions. After the 90 years, however, that have passed since Sir Arnold Knight drew attention to grinders' lung disease, the reports of successive medical officers of health testify that it still remains a dangerous occupation, and, in

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[3] On Grinders' Asthma, North of England Medical and Surgical Journal, 1830, vol. i., pp. 174–75.

[4] A paper on Grinders' Asthma, read before the Medical and Surgical Society of Sheffield, Sept. 1st, 1819.

[5] It may be remembered, however, that theirs was no enviable lot. If not liable to grinders' asthma in the times when the "dairy maid," as they called the water-wheel, was their motive power, they yet might at any moment be maimed or killed by a defective stone flying. The following is a song, very popular at grinders' festivals, of which the refrain was, "There's few suffer such hardships as we poor grinders do":—

> "In summer time we can't work till water does appear,
> And if this does not happen, the season is severe;
> Then our fingers are numb'd by keen winter frosts or snow,
> And few can brave the hardships that we poor grinders do.
>
> When war is proclaimed our masters quickly cry,
> 'Orders countermanded, our goods we all lay by;
> Our prices we must sattle, and you'll be stinted too,'
> There's few suffer such hardships as we poor grinders do.
>
> There seldom comes a day but our 'dairy maid' goes wrong.
> And if that does not happen, perhaps we break a stone,
> Which may wound us for life, or give us our final blow—
> For there's few that have such hardships as we poor grinders do
>
> R. E. LEADER: *Sheffield in the Eighteenth Century*, p. 40.

[6] Dr. Buchan, born in 1729, received his medical education at Edinburgh. He settled in Sheffield, living in the house afterwards occupied by Montgomery, the poet, for some years, leaving in 1766 for Edinburgh, where he later (1769) published his book on "Domestic Medicine" at the price of 6s. This work, for that period, had an enormous circulation in England, America, and on the continent, and it passed through about 30 editions, the last that I know of being in 1854 (an American edition). He sold the copyright for £700, and it is said that the purchaser received more than that sum as profit for each subsequent year. He left Edinburgh for London in 1778, where he died in 1805, and was buried in the cloisters of Westminster Abbey. He was the author of several other works.

[7] The paragraph continues as follows: "Mechanics are too much inclined to crowd into great towns. This situation may have some advantages; but it has many disadvantages. All mechanics who live in the country have it in their power, and indeed most of them do, occupy a piece of ground which not only gives them exercise but enables them to live more comfortably. So far at least as our observation reaches, mechanics who live in the country are far more happy than those in great towns. They enjoy better health, live in greater affluence, and seldom fail to rear a healthy and numerous offspring." This custom on the part of artisans to have their own gardens has more or less continued to the present day, but with the enlargement of the city they have had to go farther afield for their plots of land, and the proportion of these to the general working population is very considerably less and is decreasing.

[8] Diseases of the Lungs from Mechanical Causes and Inquiries into the Conditions of the Artizans Exposed to the Inhalation of Dust.

[9] J. T. Arlidge: Diseases of Occupations, p. 339.

[10] From R. E. Leader's "Sheffield."

[11] On the Prevention and Treatment of the Sheffield Grinders' Disease.

spite of the improved conditions under which grinders and cutlers work, much in that direction requires yet to be done.

Another subject closely connected with the industries of this city has been that of lead poisoning, especially among file cutters. The late Dr. J. C. Hall recorded his observations on this matter in 1865, and within recent years a Home Office inquiry was held in the city, at which evidence was given which has led to the issuing of regulations for the better conducting of the trade. This is an industrial disease, work on which has been carried on by others still living and active amongst us. The part Sheffield has played in this most important field of medical inquiry, as to industrial diseases, was recognised, too, in 1876, when this Association held its last meeting here, and special attention was then directed to diseases associated with different industries, and several papers of interest and value were read. In continuation of the same spirit a section devoted to industrial diseases has been included in our present programme, and it is pleasing to mention that it will be presided over by Dr. Thomas Oliver, who has done so much of practical value in this direction and has so enriched the literature pertaining to this very important subject.

My own work in the domain of industrial diseases has naturally been in connexion with affections of the eye, but in the course of these investigations I have been led to make observations on the general health as well as on vision, and notably has this been the case as regards miners, and the workers with di-nitro-benzol, a material which is used in making flameless explosives. This, the centre of the iron and steel industry, as well as one of the largest coal-producing parts of the kingdom, has afforded many opportunities for the study of eye diseases and accidents in relation to industrial occupations. Thus, from time to time, I was enabled to investigate many occupations, mostly associated with this district, and the results of these observations were from time to time recorded. They may be conveniently mentioned here under the following heads:—

1. Diseases due to occupations involving prolonged use or extressive strain, of the eyes and their muscles, such as nystagmus in coal miners and in other employments.

2. Those due to occupations which involve the use of certain poisonous substances, such as di-nitro-benzol, used in making explosives, and of bisulphide of carbon, and others.

3. A consideration of the effects on the eye of occupations involving exposure to excessive light or heat or both, such as burnishers, steel smelters, electric welders, bottle makers, &c.

4. Injuries or accidents amongst grinders, iron and steel workers, coal miners, &c.

The above are but the headings of investigations extending in some instances over many years, necessitating the examination of large numbers of men and of a more or less intimate knowledge of many industries. The last-mentioned, relating to eye injuries and accidents, clearly showed that many of the accidents were preventable. The wearing of protectors by the men in many instances was necessary and assistance could further be derived from a rearrangement of the work—for instance, the chipping of castings should be carried on against a sheeting or wall and not in such a way that passers by or fellow workmen would be liable to injury. For these purposes—especially the use of protectors—the coöperation of masters and men was essential. In practice it was found more easy to obtain the assistance of the employers than of the operatives who, with their true-born British spirit, resent interference with their liberty—even if such liberty be to their detriment. I cannot further deal with this subject here, but the prevention of eye accidents is an important and interesting one.

I propose now to allude only to one of the occupation diseases to which I have referred—namely, nystagmus, or oscillation of the eyeballs, so frequently met with in coal-miners—and now that it has been scheduled under the Workmen's Compensation Act it has become a matter of greater pecuniary importance both to masters and to men. It is many years now since I made the observation that has proved to be the essential part in the etiology of the affection—namely, that the cases coming under one's notice were in men working in a constrained position. At that time little had been written and little was known about the disease. Its full and thorough investigation needed an acquaintance with coal-mining, theoretical and practical; the latter was obtained by visits to coal-mines and the former by many interviews with mine managers and men, who were only too willing to aid in this line of research. It suffices here to mention that all I learnt then, and which subsequent experience and investigation has confirmed, was that the prime cause of the oscillations of the eyeball was the weariness of the elevators induced by the constrained position of the body and eyes, which the miner was compelled to assume whilst engaged in certain descriptions of work in the mine. The most conspicuous of this kind of labour is that known as "holing," to effect which the collier undercuts the seam of coal, proceeding so far that it becomes necessary for him gradually to draw his body more or less under the coal. The whole manner of work underground, however, necessitates a more or less similar disposition of the eyes, especially in those mines where the roadways and working places are too low to allow of men standing upright at their work, or, where they can do so, the examination of the roof would still require the frequent casting up of the eyes and the strained use of the elevator muscles.

It has been a contention how far the frequency of the disorder has been affected by the indifferent illumination afforded by the safety lamps, or other means of lighting employed in the mine. But nystagmus is found with all kinds of illumination underground, where electric light or large oil lamps affording abundant light have been employed. Its total independence of indifferent illumination was, moreover, definitely proved by the observation of many cases in occupations above ground necessitating a similar over-use of the elevators, in which the men pursued their work either in ordinary daylight or with artificial light of which no complaint could be made. The mining industry is conspicuous, however, in the opportunity it affords for the production of nystagmus, and it must be regarded as essentially a disease of coal-miners. There was some hope that the introduction of coal-cutting machines would tend either to prevent or lessen the frequency of the disorder, but the comparatively small number at present employed do not appear to have materially lessened the frequency of the occurrence of the affection, nor has the improved illumination of recent times had much influence. The difficulty lies in the methods at present deemed necessary for working mines and the examination of the roof, or getting coal at the coal-face. To make all the roadways of sufficient height to allow of the men easily travelling upright to the coal-face would be costly and probably financially prohibitive in many mines, but even this outlay would not relieve the miners from the statutory obligation to examine the roof of the working place frequently, or the holer from his constrained position, or the casting up of the eyes of the workman in all working places, and this latter operation would be intensified in proportion to the thinness of the seam.

This brief statement of a subject which I have dealt with at length on many other occasions for several years past has been necessary, as it was requisite to remind my hearers of the nature as well as the cause of miners' nystagmus before proceeding to refer to a subject which bears relation to it in a most important manner. The detection of firedamp[12] is a matter of vital concern to all engaged in a coal mine. I wish now to refer to a series of hitherto unpublished observations which were made some years ago as to the detection of this dangerous gas in the air of coal-mines and the approximate percentage present in the air current of the mine. The ordinary method adopted for the detection of firedamp in coal-mines is by reducing the size of the oil flame of the safety lamp until the luminosity almost disappears, and the firedamp then, if present, appears as a pale blue flame or "cap" above it, this "cap" being due to the presence of gas in the air. The amount of gas present can be approximately estimated by the appearance and dimensions of the "flame cap." The oil flame method does not clearly detect less than 2 to 3 per cent., but for some purposes it is desirable to recognise a smaller quantity even than 2 per cent. It will therefore be readily understood how necessary it is that with the ordinary methods indications of the presence of gas should be at once recognised. The class of men in a mine who are chiefly responsible for seeing that the

[12] Miners' Nystagmus and Testing for Firedamp, Brit. Med. Jour. 1893, vol. i., p. 1002.

pit is free from dangerous quantities of gas are those called "deputies" or "firemen." It is part of their duty to visit the "workings" before the colliers go to their work and during their working shift, to ascertain what, if any, gas be present, and to record the result of their examination in the official report book. Throughout their regular day's work they are constantly on the look-out for any indications of firedamp. In my writings from time to time I have particularly mentioned the presence of nystagmus among this class of underground worker.

For long it was my opinion that the apparent dancing of the safety lamps which forms such a prominent symptom of miners' nystagmus would, in especially well-marked instances, be a hindrance to the delicate detection of the "cap" spoken of as indicating the presence of gas. It has been a matter that has frequently been a topic of conversation between myself and my friends among mine authorities and the importance of the subject has been recognised by them. My interrogation also of "deputies" afflicted with nystagmus showed me long since that there was in reality the interference I had anticipated, in some cases, at all events. One deputy in particular, who was suffering from nystagmus, told me that it did undoubtedly hinder the accurate estimation of the presence of a cap, and that this became more marked as the day wore on at his work. An official in the management of a colliery, in course of conversation, stated that he knew a deputy who was the subject of nystagmus. When he was in the mine he frequently saw this man. My friend undertook to ascertain for me this deputy's capacity for detecting firedamp in the mine as opportunity offered and in such a way that would not lead the deputy to think that he was being tested. These points he carried out and I append his account.

> The deputy and I had been travelling on a low length of faces and came to a gate (roadway) in which we suspected the presence of gas—in fact, could detect it by its smell. He raised up his lamp to the roof and a "cap" began to show upon the top of the flame. He, however, continued to raise his lamp until the flame lengthened out and then said, "See there it is." I then lifted up my lamp and asked him to speak as soon as the flame began to show the cap. The result was the same as with his own lamp, for he could not see it until the flame began to lengthen out to a considerable extent, and never noticed the first signs of the presence of gas. I may say that about a minute before he had complained of dizziness, which he said came upon him when he knocked about.

There were other cases which I need not here allude to. Some time later I decided to test practically a number of those suffering from nystagmus as to their capacity to recognise the "gas cap" over the flame of a safety lamp. All the patients tested were those who had come for treatment among my out-patients at the Royal Infirmary and were therefore in no way selected. They were all suffering from nystagmus sufficiently to incapacitate them from following their employment. In my investigation I received most valuable assistance from Mr. A. H. Stokes, H.M. inspector of mines. He kindly discussed with me the best way of carrying out the investigation and on two occasions examined men with me. The ophthalmoscopic dark room with black walls in my out-patient department at the Royal Infirmary was used for the examination of the men and coal gas was communicated by a tubing to the safety lamp. The patient was allowed to remain in this perfectly dark room with only a safety lamp as a light. When he had remained sufficiently long to accustom his sight to the semi-darkness, or, as the miners term it, "get his sight," he was subjected to the test. An indiarubber tube was attached to the ordinary gas-burner and when ready the gas was directed to the reduced flame of the safety lamp and regulated so as to either give a very small gas-cap or to fill the gauze with blue flame indicative of gas. In fact, the gas was slowly increased until the patient either recognised the cap or the gauze was full and it was not wise to continue the experiment.

There is probably no method of work in a mine more calculated to intensify or give rise to nystagmus than that of holing or undercutting the coal, and although such workmen are not immediately concerned in examining the workings for gas, yet it was considered interesting to test the ability of such workmen for making the test. The dark room was so large that it allowed space for a man to assume the position and action usually followed by miners in holing or undercutting the coal, and after being placed in this attitude for a sufficient time the patient was directed to stand up and was then tested with the gas-cap. In most cases the test was made with the safety lamp in a position horizontal to the patient's eyes, but was occasionally raised, as would be the case when a miner was examining for gas at the roof of the mine. I need not weary you with the details of each examination. It will suffice to summarise the general results.

Forty-eight miners from 13 different collieries were examined, and their incapacity to detect a "gas-cap" unless a dangerous amount of gas was present was very marked in all. One did not see a big "gas-cap," as he said the lamp was "spinning too much"; another did not see a small cap at all, but when he had steadied his eyes he recognised a one-inch cap. Another could not see a cap because the lamp appeared to be all jerking about, but when the eyes became steadied and the lamp ceased to spin round he could recognise a gas-cap. Another, in whom the nystagmus was slight, could only see a large cap. Another, in whom the nystagmus was very marked, reeled like a drunken man when rising from the position on the floor he had assumed as for work. The lamp was full before he detected a cap. In another the whole lamp appeared to be "swinging round," and he could see no cap until the lamp was full of blue flame. There were several who saw either only a large cap or a moderate-sized cap when they had steadied themselves. The method of steadying the eyes spoken of consisted of resting the eyes by turning them directly downwards, when the oscillations ceased or became much less marked. Thus, another man could not see a small cap when the lamp was "moving" but could do so after the eyes were steadied, and he volunteered the remark that when at work he could only see a "cap" after he had sat down and steadied himself. In the pit, whilst working, it would take a much longer time for the eyes to be steadied than it did during my examination. Another was unable to see even a large cap until his eyes became steadied. He said himself that he was not to be trusted at testing for gas in the mine. Another could only detect a cap when the lamp was full of blue flame. Another could not tell when gas was in the lamp and when not, that is, when the coal gas supply was turned on or off. The majority could not see even a large cap. Nine were tested with the more delicate alcohol flame lamp, and all failed to detect a cap at all. The whole investigation sufficiently demonstrated to my satisfaction that a miner suffering from nystagmus was unreliable as a detector of the presence of gas in the mine.

I am not aware of any inquiries, after explosions, having been made as to the vision of those responsible for ascertaining the presence of gas in dangerous quantities, and it is true that when lives are lost the deputy is as likely, or more so, to be a victim as are others. It remains to be seen if later observers will corroborate the investigations I have now set forth, and possibly on a larger scale. At present the information I have given you suggests the need for a periodical medical examination of officials, and, in the case of a colliery explosion, an inquiry into the visual condition of those responsible for ascertaining whether gas has been present in dangerous proportions or not. Accounts of colliery disasters frequently show that the fireman is among the victims and commonly the newspaper report runs something in this way: "Men were exploring the workings when an accumulation of gas exploded, enveloping the group." I have also a newspaper report of a deputy who was brought before a bench of magistrates for not having made a proper investigation, whereby he omitted to discover the presence of gas in a certain working place. A penalty was inflicted. A witness gave evidence to the effect that he found gas after the defendant had previously inspected the place. It would have been interesting, if it had been possible to have made an examination of the defendant's eyes, to have ascertained whether or not nystagmus was present. My investigations lead me to suspect that it might have been less negligence than incapacity, owing to the apparent movements of the lamp, which led to his failure to detect a gas-cap.

Perhaps the position may be better understood if one describes shortly how a miner with nystagmus sees a safety lamp or, for that matter, any other object. The oscillations of the eyeballs give him the impression that the object looked at is in motion; thus he sees his safety lamp as if it was moving or "dancing," as he expresses it. The motions, of course, bear a corresponding relation to those of the eyeball. They will be more rapid if the oscillations are rapid, and as these motions may vary from 100 to anything up to, say, 350 in a minute the apparent movements of the safety

lamp may be very quick indeed, producing little more than the appearance of a light blur. The oscillations may be to and fro, rotatory, or the two combined, and a miner frequently describes the safety lamp as appearing to move rather more in an ellipse than in a circle. I wished to reduce this to as much a graphic representation as possible. This

FIG. 1. FIG. 2.

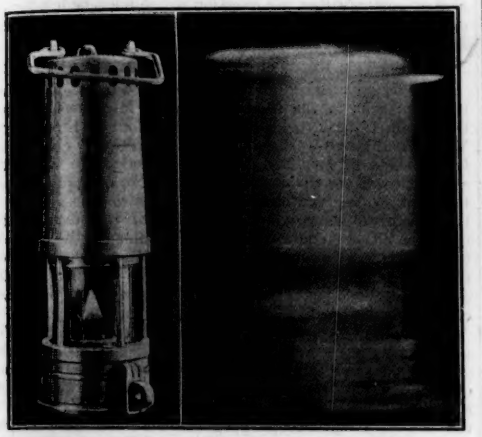

FIG. 1.—Safety lamp, photographed with the camera stationary.
FIG. 2.—A photograph of the same safety lamp as Fig. 1, but with camera moving to and fro 150 times in a minute.

has been done by a series of photographs. There are great difficulties in the way, which need not be referred to here.

The first thing to decide was, Should the safety lamp be taken moving? This was decided against; as a fact, the miner's lamp does not move. But the photographic plate was held to represent the oscillating eyeball, and was therefore made the moving object. The lamp was suspended, steady and fixed, as it might be in the mine. The photographs were taken with carefully recorded rates of movements, and the mechanical apparatus permitted of to and fro and rotatory movements, or the two combined, being represented. For the present I have been obliged to give up the attempt to secure satisfactory photographs illustrating the rotatory combined with the to and fro movements. Through the kindness of my friend Mr. A. H. Stokes, I have, however, been able to obtain an excellent photograph of the to and fro motions. In Fig. 1 the camera is stationary, and in Fig. 2 it is making 150 to and fro movements in a minute, the said motions being limited to half an inch on either side. The blur of the flame is readily observed, and the difficulty of detecting a delicate blue gas-cap will be understood. Of course, at the best such photographs can only give an idea as to the indistinctness occasioned to the miner by the apparent movements of the lamp, and are not intended to convey an exact representation of what is actually observed by him.

Before I close, may I draw yet another comparison between the work of the Association to-day and that at the time of the last meeting in this city? In 1876 there were but four sections, now there are 17, and even this number does not embrace the whole of the subjects to which, in some quarters, it was desired that sections should be devoted. This, as I understand it, is but an evidence of the remarkable progress that has taken place in all branches of medicine and surgery. Here, in a teaching university, anatomy, physiology, and pathology naturally find their places; the latter, however, is a subject which, in its modern conception, is one little dreamt of when our predecessors were meeting previously in this city, and yet with its handmaid, bacteriology, how it has pervaded the whole of medicine and rendered possible many of the most notable advances in the diagnostic and curative aspects of our profession! Medicine, during this period, has on its side made steady progress, consolidating and perfecting its knowledge and reaching forward into domains formerly beyond its ken.

Surgery has known probably its most brilliant period. It suffices to mention brain surgery and abdominal surgery. Who could have conceived the possibility, even in 1876, of removing brain tumours with safety to life, or that the abdomen would yield such a rich surgical field and such brilliant results that so happily follow? It was even later than the time of which I speak that a distinguished surgeon, since deceased, stated that surgery had reached its limit, and yet I have but mentioned two of the lines on which surgery has advanced. And what has made these and many other hitherto unheard-of surgical procedures not only possible but, on the whole, so successful, but the better understood and more widely appreciated methods of antisepticism and asepticism for which all the world is indebted to the teaching of Lord Lister? Have the public realised that millions of lives have already been saved in all quarters of the world by his researches and their practical results? Daily, and even hourly, to the remotest parts of the globe, are the benefits due to his sagacity being made use of. He has been honoured by his Sovereign, but his greatest privilege has been that his life has been spared to see for himself the fruits of his labours and to know that he will leave a name as imperishable as any among the immortals. Milton said, with truth,

> "Peace hath her victories
> No less renown'd than War."

The late Lord Beaconsfield, too, far-seeing above his fellows, remarked at the Guildhall banquet in 1875: "I believe that a policy that diminishes the death-rate of a great nation is a fact as considerable as any of those great decisive battles of the world that decide nothing." The immense advantages to the general surgeon of asepticism has been shared in to a no inconsiderable extent by the ophthalmic surgeon. Operations are more successful, the proportion of success is greater, for though the same delicate manipulative skill is still as essential as ever the most scrupulous cleanliness and aseptic precautions which have resulted from Lister's teaching have, in a large proportion of cases, banished suppuration which in other days dogged the most carefully performed operation. To mention cataract extraction alone, the successful results have gone up from considerably below 90 per cent. to, in many hands, a small number only below the 100. I speak not here on the difficulties in eye cases of securing as complete asepsis as is possible with the surgeon, but if nothing more had been gained than the knowledge that the most perfect cleanliness attainable was essential, not only as to the instruments and field of operation, but in all the patient's surroundings, whether it be in the operation theatre or ward, then alone the boon bestowed on ophthalmic patients has indeed been a great one. I speak as one who knew something of the pre-Listerian period in general and ophthalmic surgery.

In 1876, the time of the last meeting, ophthalmology was under the influence and still feeling the benefits of the teaching of Bowman, Graefe, and Donders, who, together with Helmholtz, the physicist, must be considered the makers of ophthalmology as known in modern times. There have since that time been no operations chronicled in ophthalmology to rival that of oöphorectomy at one time and appendectomy at another, in the domain of surgery.

To mention further the lines of progress would be wearisome and out of place. The knowledge, however, of errors of refraction and their causal relation to many nervous conditions may be set forth as a notable advance. And yet it is but a few years since the scoffer was heard deriding such a relation or minimising its importance. Is it a small matter that, to millions of sufferers from recurring headaches, a fuller and better understanding of the bearing of ocular conditions as a cause, and a more careful adjustment of their refraction errors or muscle balance in competent hands, has brought comfort and relief?

Such is a brief review of some of the changes which have occurred in medicine, surgery, and ophthalmology since the Association met here on the last occasion. It is necessarily brief and very incomplete, as the address has dealt with other topics. I will conclude by again according to each of you a very cordial welcome to this city.

Address in Medicine

ON

MODERN MEDICINE.

Delivered at the Seventy-sixth Annual Meeting of the British Medical Association, on July 29th, 1908,

BY JAMES KINGSTON FOWLER, M.A., M.D. CANTAB., HON. D.SC., F.R.C.P. LOND.,

DEAN OF THE FACULTY OF MEDICINE, UNIVERSITY OF LONDON; PRESIDENT OF THE MEDICAL SOCIETY OF LONDON; SENIOR PHYSICIAN TO THE MIDDLESEX HOSPITAL; CONSULTING PHYSICIAN TO KING EDWARD VII.'S SANATORIUM AND TO QUEEN ALEXANDRA'S MILITARY HOSPITAL, AND TO THE HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON.

[AFTER references to the advances of medicine during the last 30 years, and especially to the famous work of Pasteur and Lister, Dr. Fowler proceeded as follows:—]

There is perhaps no subject which is exciting greater interest in our profession to-day than the treatment of bacterial infections by the inoculation of vaccines. I had lately the pleasure to hand to Sir Almroth Wright the Fothergillian Gold Medal of the Medical Society of London, which is given triennially for scientific work in connexion with medicine or surgery published within a period of five years. It is fitting that a society of which Edward Jenner was a distinguished member should be the first to recognise publicly the value of the labours of one who has made the immortal discovery of Jenner the basis of his work. Whilst faddists and politicians have been, and still are, endeavouring to prevent the people of this county from rendering themselves immune to small-pox, vaccination has gradually acquired a wider and wider meaning, until now the principle underlying its action has become the basis of the most advanced medicine of to-day. Thus may Science ever confound her enemies!

The claims of vaccine-therapy to acceptance as a method of general application are receiving strict examination, and such they will continue to receive, and it should be welcomed, for of it nothing but good can come. The minds of workers in science are, however, not always more free than those of humbler folk from a certain narrowness of view and an inability to appreciate the merits of the work of others, and sometimes I fancy that I can see traces of this in the warfare that is now raging over the value of the opsonic index and of protective inoculation.

THE PROCESS OF IMMUNISATION.

The process followed by nature in the cure of an infectious disease and in conferring upon the individual immunity to it in the future stands now to some extent revealed. The first stages in this march of science ended with the proof that organisms are the cause of he infectious diseases. The second closed with the demonstration that by cultivating the bacteria under artificial conditions their pathogenic virulence can be greatly reduced and that whilst an animal can be killed with a very small dose of the organism freshly isolated a similar or larger dose of the attenuated virus will produce only a slight illness. The third stage toward the desired goal was reached when it was shown that the animal thereafter was protected against repeated doses of the actively virulent culture of the organism and that the artificial production of immunity had been obtained. Up to this point there is no difference of opinion, but beyond it rival theories contend for mastery.

Are the leucocytes the sole active agents in the destruction of the infecting organisms? Is immunity brought about by phagocytosis, or are the bacteria first killed or their vitality seriously lowered by soluble constituents of the blood serum, the leucocytes acting either as scavengers or disposing of the bacteria already devitalised by the serum? The weight of opinion appears to me to be overwhelming in favour of the view that agents other than the leucocytes play the more important part in this process. Some of these substances are present in the blood serum of a normal animal that has been submitted to no immunising process; others appear in the blood as the result of infection, whether occurring in the ordinary manner or induced in the process of artificial immunisation by bacterial vaccination. The bacteriolysins are substances which dissolve micro-organisms; the agglutinins cause bacteria to swell up, to lose their motility, and finally to aggregate in clumps. The opsonins discovered by Sir Almroth Wright and Douglas are substances which do not kill the invading bacteria but produce in them a chemical change of such a nature that they are rendered susceptible to the phagocytic power of the leucocytes. Whether these bodies are distinct from, or identical with, that which appears in the blood as the result of infection or immunisation is a question which must be left for the decision of those who are specially engaged in bacteriological research.

THE RESULTS OF VACCINE-THERAPY.

As to the great advance which the introduction of vaccine-therapy marks in the treatment of the infectious diseases, there can, I think, be little room for doubt. Sir Almroth Wright and his co-workers have established very clearly that in a variety of localised bacterial infections in which the staphylococci are the causative agents—for example, general furunculosis, suppurating acne, and sycosis—it is possible by the use of a standardised emulsion of the dead micro-organism either to cure or favourably influence the course of the disease. Also that in many localised and chronic infections of streptococcal origin, especially when a vaccine derived from the patient's own particular strain of organism can be procured, a like favourable result may be obtained.

Where, however, this is not possible, and a so-called polyvalent market vaccine is employed, the result is frequently disappointing; an experience not limited to the use of stock vaccines of this kind only. A polyvalent anti-streptococcal vaccine, it is to be remembered, is made by the use of streptococcus pyogenes obtained from various sources, not from streptococci of known difference in reaction. Moreover, in certain generalised streptococcal infections, both acute and chronic, the treatment by specific inoculation has given results which hold out promise of great possibilities in the near future. The majority of these latter affections occur in surgical practice with which we are not now so closely concerned, but in the treatment of the diseases of the heart we may ultimately possess an effective remedy for malignant endocarditis, which has, as its name implies, been regarded hitherto as a necessarily fatal malady.

Dr. T. J. Horder[1] has shown that in 28 consecutive cases of malignant endocarditis drawn from medical as distinguished from surgical sources, in which positive blood cultures were obtained, the infecting agents were as follows: (1) streptococcus in 18 cases; (2) bacillus influenzæ in five cases; (3) pneumococcus in three cases; (4) gonococcus in one case; and (5) staphylococcus in one case. In cases of malignant endocarditis arising in surgical practice the common infecting agent is staphylococcus aureus. Of the various types into which the streptococci are divided it is found that the majority conform to the type of streptococcus salivarius and streptococcus fæcalis, which are comparatively non-virulent organisms. In cases of malignant endocarditis in which these are the causative agents we may therefore hope to obtain the best results by the inoculation of specific vaccines.

The treatment of pneumonia and other pneumococcal infections by vaccines derived from the patients' own organisms has not so far been attended by any marked success; but the results of Continental and American observers warrant a serious investigation into the method, which should, I think, be carried on simultaneously in the general hospitals throughout the country. The day, if it arrives, when pneumonia can be successfully treated by a serum or a vaccine will indeed be memorable in the history of medicine, and to the man who introduced the method mankind will owe a debt of gratitude hardly less than they now owe to Jenner, Pasteur, and Lister. Some of life's greatest tragedies centre round pneumonia and we must all hope to live to witness the time when we can treat it with greater success than now attends our efforts.

A variety of local infections of the kidneys, the bladder, the colon, and other organs in which the bacillus coli is the infecting agent can now be successfully treated by the use of a bacterial vaccine, and it is satisfactory to learn that the method of protective inoculation against typhoid fever which Sir Almroth Wright introduced has been extensively

[1] Practitioner, vol. lxxx., No. 5, p. 714

used in the British army, the German army, and the Indian Civil Service, and that Lord Kitchener has expressed an opinion that all soldiers before proceeding to India should be submitted to this treatment.

Perhaps the greatest degree of interest attending the employment of a bacterial vaccine centres at the present moment around its use in pulmonary tuberculosis. That the new tuberculin is a remedy of value in the treatment of lupus, of tuberculous arthritis, and of various other localised tuberculous affections has, I think, been abundantly proved. Before considering its use in pulmonary tuberculosis it will be necessary to discuss the question of the opsonic index and the theory of auto-inoculation.

THE OPSONIC INDEX AND THE USE OF TUBERCULIN.

Sir Almroth Wright has, as you are aware, devised a method by which he claims that the amount of the protective substances present in any given specimen of blood can be more or less accurately measured. It is unnecessary to describe the technique employed to ascertain the opsonic content of the serum in any given disease; suffice it to state that the opsonic index is the result obtained by dividing the number of bacteria taken up per leucocyte in the presence of any given serum by the number taken up per leucocyte in the presence of the serum of a normal individual or of normal individuals, which latter is regarded as unity. It is a self-evident fact that the possession of a test by which to regulate the dosage of a bacterial vaccine is, or would be, of the highest practical importance. We should know when the dose is too large, when it is too small, and when it should be repeated. Had we any such test when in 1890 Koch published the results stated to follow the use of tuberculin in pulmonary tuberculosis? The effects of a prolonged and careful trial of tuberculin in such cases under the care of eight physicians at the Brompton Hospital were thus summarised:—

1. That tuberculin, if introduced under the skin, speedily causes inflammatory changes in and around tuberculous lesions.

2. That the action of tuberculin in lung tuberculosis is to cause breaking down of the tuberculous masses and of the lung tissue in the neighbourhood, and thus to promote the formation of cavities. That this is the case is proved by the appearance of lung tissue in the sputum, where it was previously absent and by the physical signs of cavity replacing those of consolidation.

3. That tuberculin increases the amount of expectoration, but that there is no proof that it diminishes the number of tubercle bacilli contained therein, for in some of the cases they apparently increased under its use.

4. That in many cases tuberculin injections are followed by a distinct extension of disease, as evidenced by physical signs.

5. That the reactions due to tuberculin are exhausting to the patient and cause loss of weight and strength.

6. That this treatment is specially contra-indicated in lung tuberculosis accompanied by pyrexia, as likely to convert intermittent into continuous pyrexia.

7. That lung excavation accompanying the use of tuberculin may be followed by contractile changes due to fibrosis. This was shown in two of the cases under observation where diminution of cough and expectoration and gain of weight took place.

8. That the tuberculin did not favourably influence the course of the disease in the majority of cases, that in some the effects were detrimental, and that even in the stationary and improved cases it was difficult to ascribe any distinct improvement to the injections which might not have been equally attained under the treatment ordinarily used in the hospital.

The new tuberculin is now being used at the Brompton Hospital and elsewhere, but I have not heard of any of the disastrous results above detailed following its employment. The doses, it is true, are infinitesimal compared with those given in 1890 and the following years. Then it was poisoning, now it is vaccination. But has not this change of dose been mainly brought about by the observation of the opsonic index? Has not the successful treatment of the various affections which I have already enumerated been controlled by the opsonic technique? It is true that discordant results have been obtained when the estimations of the index were made from the same blood by different observers, some trained in Sir Almroth Wright's laboratory and others trained or untrained elsewhere, but the indices recorded by those who had received the same training showed very slight variations. This question has been recently very fully, and, as it appears to me, adequately dealt with in a paper by Mr. Alexander Fleming[2] on Some Observations on the Opsonic Index, with Special Reference to the Accuracy of the Method and to some of the Sources of Error.

THE THEORY OF AUTO-INOCULATION.

Let us now consider briefly the theory of auto-inoculation, which also has been evolved from a study of the opsonic index. The theory is that from a focus of infection within the body a process of auto-inoculation may be in operation and that many of the phenomena indicating recurrent activity of the organism are best explained by assuming that at intervals the patient is spontaneously inoculating himself with a varying dose of the virus of his disease. This theory took its origin from the investigations of Freeman on the effect of massage on joints affected with gonococcal arthritis. He showed that any movements, passive or active, which are sufficient to affect a focus of infection result in a discharge of poison into the system, and that the discharge produces the same effect on the blood measured by variations in the opsonic index as an artificial inoculation. "If the blood of a patient suffering from advancing pulmonary tuberculosis is examined from day to day as regards the opsonic index it is found that in an absolutely irregular way, without apparent rhyme or reason, the index is constantly varying; negative and positive phase succeed each other at irregular intervals. We are dealing here with irregular inoculations of unmeasured poisons and these doses of poison are coming from the focus of infection in the lung where the bacilli are multiplying—that is, they are the result of spontaneous auto-inoculation."[3]

In a case of pulmonary tuberculosis with a lesion which is neither arrested nor quiescent exercise beyond a certain moderate degree almost invariably causes some amount of pyrexia, either temporary or permanent. The theory of auto-inoculation explains the fact which I have observed, that in nearly all the cases in which arrest obtained by sanatorium treatment has been followed by relapse this has been due to over-exertion in sport or games and not to the effects of work. The importance of rest as the main factor in the treatment of the fever of the disease has long been appreciated. Have we not now an explanation of this and a proof of the accuracy of our clinical observations?

PYREXIA IN PULMONARY TUBERCULOSIS.

Writing in 1893[4] I called attention to the fact that by observation of the temperature in a case of pulmonary tuberculosis it is possible to determine the nature of the changes in progress in the lungs, and subsequent experience has confirmed the correctness of the views then expressed. The miliary, caseous, and fibroid varieties of the disease are characterised in each case by a definite and distinct range of temperature, and this is met with, not only in typical examples of those forms of the disease, but also when, as frequently happens, they appear as temporary complications during the course of a case of chronic pulmonary tuberculosis. The conclusions to which I was led by a comparison of the temperature charts in fatal cases with the lesions found post mortem included the following:—1. The degree of fever in cases of pulmonary tuberculosis is a measure of the activity of the morbid process. 2. Marked pyrexia is always associated with an increase in the tuberculous lesions. 3. The pyrexia is most marked when the disease is making rapid progress in an organism still capable of reaction. The latter condition is essential, as in cases characterised by considerable failure of vital power continuous extension of the disease leading up to a fatal termination is not uncommonly observed in association with the absence of pyrexia.

In discussing the treatment of the pyrexia I stated:[5] "It is essential that the patient should remain completely at rest. This is the first and most important measure to be adopted, and without it all others are likely to prove of little effect." Much has happened since and our knowledge has been enlarged by the careful and continuous observation of

[2] Ibid., vol. lxxx., No. 5, p. 607.
[3] Inman: The Value of the Opsonic Index in Pulmonary Tuberculosis, Ibid., vol. lxxx., No. 5, p. 661.
[4] Ibid., vol. ii., No. 4.
[5] Fowler and Godlee: The Diseases of the Lungs, p. 404.

many cases under treatment in sanatoria. If, however, the above conclusions are compared with the most recent statement of Sir Almroth Wright's views, it will be seen that there is not much that needs to be modified. He states[6] that, "while the temperature curve is a measure of intoxication and not of immunization, and while there is no direct and constant relation between the temperature curve and the production of antibacterial substances in the organism, we may take it that a diminution in the antibacterial potency of the blood generally leads to a multiplication of microbes in the system, this to increased intoxication, and this in its turn to a rise of temperature. In like manner we may take it that an increase in the antibacterial potency of the blood leads as a rule to a restriction of microbial growth in the organism, this to diminished intoxication, and this in its turn to a reduction in the temperature. But while it is the rule to find this inverse relation of temperature to antibacterial potency, it is certainly not the invariable rule. It is notorious that excessive intoxication may condition a fall in temperature, and it is conceivable that a rise in temperature may sometimes be directly associated with efficient immunizing response."

THE OPSONIC INDEX AND GRADUATED LABOUR.

Whilst it is true that "the opsonic technique needs but simple laboratory instruments, and may be acquired by any one who will give the necessary time and application to it," it will not, I think, be denied that if and when in any given case or class of cases it is possible to avoid the necessity of determining the opsonic index of the blood at frequent intervals during a prolonged course of treatment, it is desirable to do so, if for no other reason than the saving of expense to the patient, who is probably from his illness debarred from earning his livelihood. The question is whether past experience and the observation of clinical symptoms can serve as adequate guides in the use of vaccines. After an exhaustive consideration of the subject Sir Almroth Wright concludes that whilst we can in many cases rely upon these data there are whole classes of cases in which they cannot be trusted to furnish the necessary guidance.

As regards the opsonic index in pulmonary tuberculosis, the question has lately been put to the test at the Frimley Sanatorium of the Brompton Hospital, where during the last three years a system of graduated labour, devised and introduced by Dr. M. S. Paterson, the medical superintendent, has been in operation. For a complete description of the method reference may be made to Dr. Paterson's paper read before the Medical Society of London.[7] The results have been successful beyond any which I have hitherto observed and are due to the extreme care and judgment which have been exercised in suiting the amount and kind of work to the physical capacity of each individual patient. After this system had been in operation for two and a half years, during which period clinical observations, and especially the effect upon the temperature, were the sole guides employed in deciding upon the amount and kind of labour to be performed by each patient, the results were tested by the observation of the opsonic index by Dr. A. C. Inman, the bacteriologist to the Brompton Hospital. In carrying out this test the most extreme precautions were taken to eliminate all sources of error depending upon what may be termed "unconscious bias." The examinations showed that 95 per cent of the patients working in the various grades of labour, ranging from walking, carrying baskets loaded with varying weights of earth, and digging, to working as navvies upon the construction of a reservoir, were found to have opsonic indices above the normal at some time during the day.

When this system of graduated labour was introduced as as adjunct to sanatorium treatment it was not realised that the patients, in addition to the benefits to be expected from the increased functional activity of all the organs and tissues of the body which such labour induces, were at the same time being treated with doses of tuberculin of their own manufacture. Yet, if we accept the theory of auto-infection, no other explanation appears to me so completely in accord with the observed facts; we were in the position of M. Jourdain, who discovered that for ten years he had been writing prose without knowing it. During the month in which these tests were carried out Dr. Inman was only able to discover two cases in which the amount of work done had exceeded the limits of prudence; in both the slight fever, headache, and loss of appetite induced were accompanied by a negative phase in the opsonic index, which lasted quite a short time, and did no appreciable harm. These facts appear to indicate very clearly that in afebrile cases of pulmonary tuberculosis, when the treatment is supervised with the exact knowledge of the capacity of each individual obtained by Dr. Paterson at Frimley, clinical observation may be trusted, and the continuous control of the opsonic technique is unnecessary. Nevertheless, even in such cases questions as to the true interpretation of certain symptoms do from time to time arise, and resort is necessary to the opsonic index, from which an immediate answer may be obtained, whereas it might take a month or more to arrive at a decision from observation of the clinical condition alone.

As the result of the labour of these patients there is now to be seen at Frimley a reservoir 108 feet long, 58 feet wide, and 13½ feet deep, capable of holding half a million gallons of water. Its construction necessitated the excavation and removal to a variable distance in baskets or barrows of 4175 tons of earth. Nearly 1000 tons of concrete were required for the walls, the whole of which was made and placed in position by the patients. Much other labour of a less striking kind has also been performed. Of the 344 patients who during two and a half years were engaged in this work, 253 are earning their living, nine are not at work, eight are dead, and 74 have failed to report.

The appearance of a large number of the old patients who were present at the sanatorium on July 4th of this year was extremely satisfactory, and that of the men then actually engaged in the hardest labour was, if possible, even more so. Anyone who will take the trouble to go to Frimley will agree that the best prescription in afebrile cases of pulmonary tuberculosis is "graduated labour." No one who has watched the change in the physical condition which in the course of six months or less occurs in these patients when daily engaged in graduated labour, a change so great that at the end of their treatment they look more like navvies than consumptives, can imagine that a like effect can ever be produced by the administration of any drug. Such individuals, it must be remembered, were often weaklings before they were consumptives and if we merely arrest their disease weaklings they will remain.

SANATORIUM TREATMENT AND THE USE OF TUBERCULIN.

When in 1899 I opened the discussion on the sanatorium or open-air treatment of pulmonary tuberculosis at the Royal Medical and Chirurgical Society, it required some courage to advocate what many thought to be only one more addition to the long list of remedies which they could recall which had enjoyed a short vogue and then disappeared to the limbo of the forgotten. The buckets of cold water thrown over it during the discussion would have certainly drowned an infant of less vitality. Those who have taken part in the introduction of the sanatorium system of treatment into this country can, I think, now look back with satisfaction to their share in a work which has most certainly effected great good to individuals and has had far-reaching effects upon the health and habits of the people. It may even have suggested the introduction of the Daylight Saving Bill, a measure which has already obtained the approval of many men eminent in science, and which should, I think, receive the support of a profession to whose care is intrusted the physical welfare of the people. The badge of the movement should be the rising sun, and beneath it—

"As thy days so shall thy strength be."

But are we about to witness the disappearance of the sanatorium? I think not. On the contrary, I look forward to a more general use of sanatoria for a variety of affections other than tuberculosis. As the advantages of an open-air life combined with careful medical supervision become better known, the sea voyage which so often means life in a windy passage on deck and a stuffy cabin below, and the hotel at a health resort on the continent, where influenza perhaps is rife, will be replaced by sanatoria in convalescence from acute disease and in many cases which require the constant medical direction which has in this country hitherto been so difficult to obtain, although on the continent the necessity for it is generally recognised.

[6] Practitioner, vol. lxxx., No. 5, p. 580.
[7] THE LANCET, Jan. 25th, 1908, p. 216.

Have we in the new tuberculin a remedy of value in the treatment of pulmonary tuberculosis? Its good effects in localised tuberculosis have been proved by many observers. Convinced, as one was long before 1890, that any remedy which caused a rise of temperature must be harmful when the disease affects the lungs, one had no hesitation, after a comparatively brief experience, in condemning it in the form and in the doses then considered necessary. But I am now more hopeful. The temperature charts of some cases which have been under the care of my colleague, Dr. A. Latham, appear to me to show that it is possible by the administration of minute but gradually increasing doses of the new tuberculin by the mouth, in combination with serum or saline solution, to produce an effect upon the temperature in pulmonary tuberculosis. If with increased experience this should prove to be so, we may, I think, confidently believe that it must be attended by a lessened activity of the disease. There are cases, for example, in which sanatorium treatment appears temporarily to stop the process of auto-inoculation, but fails to develop the resisting power sufficiently to enable the patient to take exercise without inducing a recurrence of pyrexia. In some cases of this nature it has been observed that the administration of tuberculin may effect the desired result. So long as auto-inoculation continues or recurs there is no real arrest of the process. But much labour is still necessary, and the working out of this problem must be left to those who have had a prolonged experience of the affection and have special opportunities of observing the effects of the remedy. My belief and hope is that sanatorium treatment and vaccine-therapy will prove of mutual assistance in our warfare against a disease which is now in retreat and over which those who come after us may obtain a complete victory.

It is to be hoped that there will never be a repetition of the lamentable lack of judgment, of self-control, and of those critical faculties which should characterise the members of a scientific profession which were displayed in 1890 and the following years. If to-morrow we were in possession of an absolutely certain remedy for pulmonary tuberculosis it is probable that nearly two-thirds of the existing cases would be beyond the hope of cure. There is no drug known which is not limited in its effects by conditions of the body and the extent of the disease, which latter in cases of pulmonary tuberculosis is generally about three times greater than the physical signs indicate. Ought not these facts to give pause to those irresponsible directors of the lay press who are careless of the hopes they excite or the grief which they cause, so long as they obtain sensational copy which will increase the sale of their papers?

I lately saw a very robust-looking officer just arrived from abroad who had been placed in a rather curious predicament by a too blind belief on the part of a military surgeon in the infallibility of Calmette's test for tuberculosis. The officer contemplating marriage, and having some fear that he might be tuberculous, consented to be tested. He was assured that if the reaction did not occur before the afternoon of a certain day he would be proved to be free from any taint. That evening he went to a dance, and, confident of his soundness, on meeting the object of his affections he proposed and was accepted. But alas! on the following morning the eye gave a positive result. Torn with conflicting emotions he determined to come home at once and seek advice, but before he left his anxiety was somewhat diminished and his confidence in his medical friend a little shaken on learning that the whole of the rest of the polo team had reacted to the test.

There are many other problems in the medicine of to-day which I should like to have discussed, but I must pass on to fulfil the promise with which I set out.

THE STUDENT OF THE FUTURE AND THE UNIVERSITIES.

What of the student of the future? I think we may confidently conclude that he will in larger and ever-increasing numbers resort to the universities for the preliminary and intermediate subjects of his education, and that the medical schools will become, as in my opinion they should be, clinical schools, limiting their sphere to the teaching of those subjects of the curriculum which must necessarily be studied in connexion with a hospital. These subjects are undergoing, and will continue to undergo, such an enormous expansion that the schools, even when they restrict their energies to the task, will find it year by year more difficult to teach the whole of them satisfactorily. Medical education is a form of technical education in the efficiency of which the public, if they only realised it, are interested as much as, if not more than, in many others to which public money is given, inadequately it is true, but without hesitation.

In the future endowment and the financial support of public bodies will only be given to the universities, and nothing can be more shortsighted than to exclude our students from the benefits enjoyed by those in other faculties. A temporary majority of the teachers in the London schools, in the exercise of their wisdom—or shall I say folly?—have recently decided that this shall be done, and I have just been engaged in ascertaining my personal liability in connexion with the proposed return to the generous donors or to their representatives of a sum of £70,000 subscribed to a scheme for the building and endowment of an Institute of Medical Sciences to be under the control of the University of London. This sum might easily have been doubled or trebled if the Senate of the University and the teachers in the schools had given a whole-hearted support to the scheme. When a body responsible for the issue of such an appeal allows obstruction to thwart it at every step, and when it has to fight for its life at every meeting of the committee ostensibly formed to carry it to a successful issue, it is not astonishing if it terminates in disaster. Great ends are not achieved by such means. *Delenda est Carthago.* Let us hope that through the fire of a Royal Commission it may pass to renewed life and nobler aims. In this and other cities you possess the priceless spirit of local patriotism, which, when questions of great moment are to be decided, insists that the minor interests of individuals and institutions shall be subordinated to the common good.

Speaking, as I feel sure I may, in the name of this Association, I congratulate the city of Sheffield on the establishment of the University, and wish it all possible success. For myself I would say that I do not share the fears which some express at the recent increase in the number of universities in this country, for, on the contrary, I believe it to be an unmixed good. When this Association met in Sheffield in 1876 the Address in Medicine was given by Sir Edward Sieveking and much of it was devoted to the question of the relation of the profession to the universities. "To my apprehension," he said, "a university does not deserve the name which does not within itself teach the principles and theory of all science and which adopts a *régime* and habits that exclude from its precincts all whose mental calibre cannot adapt itself to one formula of a classical or mathematical shibboleth or whose means compel them to enter a professional calling without unnecessary delay. I maintain that all members of learned professions ought to enjoy a university training and that a country whose universities do not allow of its students acquiring the entire theoretic part of their respective professions within their walls neglects the first duty for which they were called into existence. I will not now speak of any other profession than our own, but as regards medicine I conceive that many of the educational difficulties that have been so long under discussion and that are far from being removed will disappear when such arrangements are made at our universities that the great body of practitioners can avail themselves of their advantages." Wise words from no narrow mind: "Long under discussion and far from being removed" 32 years ago! Still under discussion and "far from being removed" in London to-day! How slowly an institution may move when it is dominated by the Progressive party!

THE PRACTITIONER OF THE FUTURE.

In time the student becomes a practitioner. What advice shall we offer him at the outset of his career? To maintain the high traditions of unselfish devotion to duty which have characterised the profession in the past; to be guided in all the difficulties which he will meet by the simple rule to act as a gentleman; to cultivate a cheerful and hopeful disposition, and to keep an open mind. In the latter lies the secret of perpetual youth. Sir Andrew Clark, whom to know well was to love much, was fond of saying that "No man is old until he ceases to be able to adapt himself to his environment. When I go into the country," he said, "and meet a practitioner who talks about those damned microbes I know he is old. It does not matter what his age may be." But how will the practitioner fare for a livelihood in the

future if the ever-increasing tendency of the people to expect gratuitous medical attendance continues unchecked, and neither political party considers it to be its duty to encourage habits of thrift amongst the working population?

I observe from a publication recently received that 119,382 in-patients were treated in the medical charities of London during the year 1907, and that no less than 6,019,203 out-patient attendances were recorded. Exactly how many individuals were concerned in producing this enormous total it is difficult to state, but it is estimated at about two and a half millions. It would be interesting to know how many persons received gratuitous legal advice in London last year. For 30 years to my knowledge the abuse of hospitals has been a burning question, and many earnest men have given time and thought to its consideration; yet nothing of any moment has been done. Year by year the numbers continue to grow, and we learn that last year 183,800 more were treated than in the previous year. I believe this state of things is not confined to London, and I may be told, as I have been before, that inquiries show that there is no evidence of abuse. If the figures do not speak for themselves, then the evidence has not been sought for where it would be found—namely, amongst those engaged in hospital and general medical practice. This abuse of the generosity of the profession will, in my belief, continue and increase so long as it is to the interest of the managers of hospitals to show that they are doing what it is the fashion to call "a great work."

Having enjoyed a somewhat extended and varied experience of hospital committees I have learnt to admire the devotion of their members to a self-imposed duty of ever-increasing difficulty, but this does not dispose me blindly to trust to their wisdom. The moment that the relief of mere numbers ceases to be a merit and it becomes to their interest to show that they have done everything possible to insure that those who receive gratuitous medical treatment are really deserving of it, a great falling off in the attendances will immediately occur. Then, and not until then, it may be possible to establish provident dispensaries which shall, as is the case at Northampton, include the great bulk of the labouring population permanently dwelling in a given area. The only body which can bring such an influence to bear upon the managers of the hospitals of London is one which has the power of the purse, and such a one now exists in the governing body of King Edward's Hospital Fund, to whose earnest consideration I commend the question.

THE PHYSICIAN OF THE FUTURE.

Let us now pass on to consider the physician of the future. Sir Almroth Wright is of opinion that he will be an immunisator. We shall all agree in hoping that it may be in his power to afford immunity to his patients from as many diseases as possible and we shall also agree that as a student and subsequently he must have received a careful and prolonged laboratory training. But I submit that he must continue to be in the future, as he has been in the past, above all things a man of wide clinical experience. No matter how great the advance of science may be in the future there will never be a royal road to medicine; it will be the common road that all must tread who aspire to treat disease and after the class-room has been left behind it will lie through the wards of the hospital, the post-mortem room, and the clinical laboratory, and will always lead back to the bedside. The physician of the future will have to deal with human nature as we have had to deal with it. Times may change, ideals may alter, but water and human nature will ever remain weak. They are the only two things in this world on which it is safe to stake one's last shilling. It used to be thought that there was a third—namely, beer—but recent events have shattered that opinion.

In the future, as in the past, the first and most important thing will be the diagnosis of the patient's malady. Once that has been accurately determined the rest is comparatively easy. I lose no opportunity of impressing on students that the one thing that cannot be read up is "diagnosis"; that must be learned at the bedside. Some may think that as medicine becomes more and more firmly fixed upon a sure basis of science the diagnosis of disease will gradually prove an easier task. It will become more certain in competent hands, but it will never be easy, for as science grows it will continually place new burdens upon the physician and the practitioner. I have had many opportunities of observing that the recent increase in the number of laboratory tests available is surely leading to the disuse of the older methods of investigation—the employment, that is, of all the senses with which nature has provided us—and it is a physiological law that atrophy follows disuse.

It must have occurred to every physician to be called to a case in which the condition of the blood and of every secretion that lends itself to examination had been carefully investigated, not once only but several times, and yet the diagnosis was as far off as ever, if not further off; whereas an intelligent use of the old-fashioned methods of inspection, palpation, percussion, and auscultation showed that it was literally staring one in the face. In so saying I shall not, I trust, be thought to under-value the very great assistance given to diagnosis by the newer methods. I am only urging that the older should not be allowed to fall into disuse.

The bacteriologist, in some at least of the general hospitals, is now regarded as the servant of the physician who orders that certain investigations shall be undertaken. This is not, I submit, the position to which he is entitled. In important cases in which his advice and assistance are required he should consult on equal terms with the physician at the bedside, and the investigations to be made or the treatment to be adopted should be the joint result of their deliberations. If they differ the view of the senior partner should prevail. The future will determine for itself whether, or to what extent, these two individuals should be united, but it is clear that in the transition period to which we belong they must act together, as each is the necessary complement of the other. That any person professing ignorance of clinical medicine should independently attempt to treat disease is a position so unsound that it needs but to be stated to be condemned.

It will, I think, prove to the advantage of the consulting physician that his rôle of practice should in the future be more clearly defined, and that some recognised means should be provided whereby he may be able, if he so desires, at some period of his career to let it be known that he has ceased to undertake regular medical attendance. It may be so now in theory, but if so the theory and practice differ. The position would be analogous to that of a junior barrister who desires to be a leader. The public, reading that Mr. A has been appointed one of His Majesty's counsel, possibly imagines that the King, having observed the skill shown by Mr. A in the conduct of his cases, has determined to secure his services. The fact is that Mr. A, from a confidence in his own powers—a confidence which the future sometimes shows to have been misplaced—or from a fear that a competitor may supplant him, applies to the Lord Chancellor to be given a silk gown, a request which that high official at his discretion either grants or refuses. Sidney Smith was once asked by an anxious mother what profession he recommended for her son. He replied, "Madam, I should bring him up to be a bishop; I have observed that it is a very respectable calling." But one must begin as a curate. I refrain from suggesting the exact means by which in our profession this change of status should be brought about, but I am not advocating a measure which I have not myself adopted for many years or one which there is any serious difficulty in carrying into effect. The claims of humanity and friendship will, of course, always remain paramount. I believe that by the adoption of this step the consultants would attain a higher position in the estimation of the public and that the general practitioner would thereby obtain an assurance which he now lacks that he will not be supplanted in the confidence of his client.

There is yet another change which I think the physician may do well to consider. I can recall the time when in the pelvic region pathological and clinical darkness reigned supreme. Into this I was privileged in 1884 to throw a ray of light by a Contribution to the Pathology of Hydrosalpinx and Pyosalpinx. Since then light has come from many quarters, and to-day the affections which originate there are accurately diagnosed and successfully treated by a medico-chirurgical person who is not thereby excluded from the Fellowship of the Royal College of Physicians. May not the physician whose department of practice lies in other regions follow this example with advantage to himself and also to the public, for whom the profession exists and to whose interest it is that two persons should not be required for work which can be adequately done by a single individual?

To give a concrete example, I can see no reason why the physician who is competent to diagnose the existence of an empyema and to locate its position should be debarred from employing the only means by which it can be successfully treated. It is, to my mind, quite certain that if the younger physicians do not boldly make this departure from old traditions they will find themselves year by year more and more displaced in the practice of their profession.

THE MEDICAL PROFESSION.

We are frequently reminded that ours is a noble profession, and so it is, and one which gives a continuous interest to life and to which it is a source of pride and honour to belong; but I have observed that this reminder often precedes an attempt to place upon our shoulders, already overburdened with unpaid labour, some further duty similarly recompensed. To this there is a limit, which has long since been reached, if not overstepped. The public is apt to take a profession, like an individual, at its own valuation, and it may be to our advantage in the future to let it be known that we regard our services as worthy of their due reward. Many of my friends have lately received the offer of commissions *à la suite* in the Territorial Army, and I hope that they have accepted the honorary office, for I conceive that it is our duty as a profession and as individuals to give to the Territorial Army our most hearty support so long as it holds the field—even if it is the only field it ever holds. Perhaps some of them in their reply may have taken the opportunity to point out the great advantage which would accrue to the nation if the whole of its youth was compelled to submit for a brief period to a course of physical training, which would strengthen their bodies and discipline their minds, and convert the slouching youths of public schools and country lanes into well-set-up young men capable of defending their country in time of need. In the days of our forefathers, when the bow and arrow was the national weapon, this duty was recognised, for in the archives of the city of Winchester—the cradle of the English race—it is recorded that men were fined when they had "not frequented archerie, nor used to shoot on long bowes by the space of one month, contrary to the statute thereupon made." To be compelled to fit one's self to defend one's country was not then accounted to be "un-English." History may prove that a people that refuses to accept the obligation of military service thereby shows itself unworthy to hold a high position amongst the nations of the world.

I stated at the outset that I had no fear for the future of medicine. I will close with the expression of an equally confident belief that in the times to come those who practise it will be held in increasing honour, and that of him who is faithful to its high traditions it will be true, as long ago it was of him who sought wisdom, that—

"Many shall commend his understanding."
"His memorial shall not depart and his name shall live from generation to generation."
"If he continue he shall leave a greater name than a thousand; and if he die, he addeth thereto."

Address in Surgery

ON

PROPHYLAXIS IN SURGERY.

Delivered at the Seventy-sixth Annual Meeting of the British Medical Association on July 30th,

BY R. J. PYE-SMITH, CH.M. SHEFFIELD, F.R.C.S. ENG.,

CONSULTING SURGEON TO THE SHEFFIELD ROYAL HOSPITAL; PROFESSOR OF SURGERY IN THE UNIVERSITY OF SHEFFIELD.

MR. PRESIDENT AND COLLEAGUES,—My first and pleasant duty is to return my sincere thanks for the honour of being placed in the position I occupy at this hour. I owe it, I gratefully acknowledge, to the generous good feeling of my local colleagues and to the privilege of seniority, but I accept it as a compliment to this city and a recognition of the position occupied by provincial surgery.

LORD LISTER AND ASEPSIS.

Looking back over the 40 years since I entered as a student at Guy's Hospital, great indeed have been the changes and developments in the practice of surgery that it has been my happy lot to witness. But all other advances are overshadowed by the epoch-making work of Lord Lister who at that time was beginning to throw the searchlight of his genius on to the subject of sepsis, and has long since emancipated operative surgery from the clutches of infective complications. He found a truly terrible mortality attending compound fractures and operative wounds. He saw the death-rate fall, as if by magic, when he had traced it to its source and had controlled its cause. He found our large hospitals hotbeds for gangrene, suppuration, and pyæmia. He has seen those dire accompaniments of wounds successfully banished and hospitals made the safest of all places for operations, since the principles he enunciated have been universally adopted. He found surgeons and patients alike dreading almost any operative procedure, on account of the attendant dangers of sepsis, and regarding it as a last resort. He now sees them both often welcoming operation at the earliest possible stage as the surest and safest means of treatment. He found the abdomen, the large joints, and all other serous cavities closed to hopeful surgery on the same account. He has lived to prove them as safe as any part of the body and a prolific field for successful operative treatment. He found surgeons desperate or despondent from continual disappointment, in spite of their great manual dexterity. He lives to see them calm and confident with the hopefulness that comes from the experience of safety. Truly a record such as this places the name of Lister among those—

"Whose thoughts, like bars of sunshine in shut rooms—
'Mid gloom, all glory—win the world to light."

The development and application of antiseptic principles have indeed been the dominant influences at work these 40 years in the advance of surgery, and the victory of operative asepsis is now within the reach of every careful surgeon. And in that fact is seen the great practical value of the patient investigations and bold generalisations of Lord Lister. He has brought the life-saving influences of his work within the reach of the humblest surgeon and the poorest patient. And as an advancing army effects less by the distance that its vanguard has penetrated into the enemy's country than by the subsequent marching up of the rank and file, so the greatest discoveries in surgery can be of but little utility to the race without the coöperation of those who are practising the art. Thus it is largely upon us who are in the ranks that the duty devolves to utilise the new knowledge that our leaders have gained and to carry into our daily work and into the homes of our patients the illuminating results of their pioneer work.

PROPHYLAXIS IN SURGERY.

Vast, indeed, are the fields opened up by the antiseptic method, wherein operative surgery is now reaping its harvests in late as well as in early stages of disease; but it is in prophylaxis that the results of antiseptic precautions are chiefly seen and are of such far-reaching importance. The prevention of the bacterial infection of operative wounds (operative asepsis) is the glory of antiseptic surgery. But when sepsis is already present, or where the potentially-infective mucous membrane of the alimentary canal is involved in the operative area, we must trust in a greater degree to the natural resistance of the tissues, and supplement this not only by an aseptic operative technique, but also by all the means at our disposal for the specific immunisation of the body. Such materials as nuclein (for inducing hyperleucocytosis), serum, normal and variously modified (for supplying antimicrobic, antitoxic, and various other chemical substances), and bacterial cultures, dead or living (for stimulating the manufacture of such substances in the blood), are on their trial. And may we not hope, thanks to the laborious work of Sir Almroth Wright and others, that we are on the eve of such discoveries in the practical use of vaccines as shall bring both acute and chronic infections under control and place in our hands another weapon wherewith to prevent the late and often fatal stages of both local and general infection?

Prophylaxis is, it seems to me, as real and valuable in surgery as it is in medicine or obstetrics or even in sanitary science—a thesis ably maintained from this chair 12 years ago by Dr. Roderick Maclaren[1] and well

[1] Address in Surgery, by Roderick Maclaren, M.D., THE LANCET, August 1st, 1896, p. 296.

worthy of our renewed consideration to-day. The preventive achievements of sanitation are indeed among the most conspicuous of the flowers of civilisation of which our profession is justly proud. They form a first line of defence which guards us from the overwhelming attack of such foes to health as plague, leprosy, cholera, malaria, yellow fever, and Malta fever, some of which have decimated our population or disabled our army in past centuries, some almost till now. Medicine, which by checking functional derangement is constantly preventing organic disease, has long devoted direct attention to the prophylactic aspect of her work, and as our second line of defence has obtained signal victories with regard to smallpox, diphtheria, hydrophobia, and other diseases, whilst obstetrics can scarcely have been practised without some regard being had to the prevention of mishaps and complications to mother and child. But when the enemy has reached the third line of defence in surgery it may seem rather late to speak of prevention. That, however, depends on what it is we hope and try to prevent. When a patient already has a tumour we cannot, of course, prevent his being the subject of the tumour, but we may hope to prevent its development and fatal termination. Again, in the performance of the necessary operation in such a case we have it in our power to prevent pain by the exhibition of an anæsthetic, to prevent dangerous loss of blood by efficient hæmostasis, and to prevent bacterial infection by an aseptic technique. So, when we fail in keeping away the seeds of disease, we may still, perhaps, get at the root of the mischief or nip it in the bud and, if not even that, we may be able to prevent its wide spread or some of its most injurious effects.

LEGISLATIVE PROPHYLAXIS.

As civilisation becomes more extended and more complex its attendant dangers are increased. The introduction of machinery of increasing power into more and more industries, the development constantly going on in the potency of the implements of war, and the perils inseparable from ever-increasing rapidity of locomotion render it more and more imperative that the risks of life should be correspondingly counteracted by growing ingenuity and care. Legislation attempts to deal in certain directions with the conditions which are thus brought about, and we have, under the Factory and other Acts, regulations for the fencing of machinery, for the prevention of explosions in mines, for reducing the risks of working in various poisonous substances, and arrangements for preventing total loss of wages to those who are disabled by accident from earning them. It is sad to find by painful experience to what an extent unfair advantage is taken of such provisions as these last by some of those for whose benefit the laws were framed. Instead of honestly trying to get back to work as soon as possible, thus proving their manly independence and retaining their self-respect, the injured workmen, in too many instances, try to persuade themselves and their medical examiners that they are incapacitated for work long after their condition justifies such a contention. The hope of obtaining a lump sum as compensation no doubt acts in some cases as a strong motive to profess that no improvement is taking place in their condition. Thus they tend to drift into permanent idleness, bringing comparative poverty on their families and becoming miserable moral wrecks. I fear such cases are sometimes supported in making too much of their aches and pains by members of our profession who seem to have little admiration for the Spartan character.

> "The labour we delight in physics pain,"

and I think that where pain is the sole ground for non-resumption of work it should not be admitted as sufficient unless it appear to be of a disabling character. It is much to be desired that when compensation cases come before a county court judge he should habitually be assisted by a medical assessor whose technical knowledge would always be of value to the judge and would often prevent an incorrect construction being put on the opinions given by medical witnesses called on opposite sides and an unfair inference being drawn that they are inconsistent and irreconcileable. A brilliant example of the successful result that occasionally rewards legislative and administrative prophylactic action is furnished, thanks to the enlightened firmness of the Right Hon. Walter Long when President of the Board of Agriculture, by the present banishment from this country in the dog, and consequently in man, of that terrible and uniformly fatal disease, hydrophobia. Many other countries have still to fall back on the second line of defence provided by the no less truly prophylactic vaccine obtained with such admirable patience and insight by the experimental labours of Pasteur.

PROPHYLAXIS IN OPERATIVE SURGERY.

In operative surgery we are specially concerned with the prophylaxis of pain, of hæmorrhage, of shock, of sepsis, and of death.

Pain.—The prevention of pain during the performance of an operation can now be almost invariably assured by the use of one or another method of inducing anæsthesia. For major operations the induction of general anæsthesia by means of chloroform, ether, ethyl chloride, nitrous oxide, or a sequence or mixture of some of these agents is a well-established routine which is not likely to be soon replaced, for general application, by any of the more modern methods of preventing the patient feeling pain. When skilfully and carefully administered by experienced anæsthetists with due attention to the condition of the patient and the nature of the operation, as well as to precautions against respiratory infection, vomiting, and overdosing, such anæsthetics involve but small risk to life and are applicable to the most serious and prolonged operations on all parts of the body. But they have their drawbacks. The preliminary starvation, necessary for the prevention of dangerous vomiting during the absence of consciousness, has sometimes a decidedly depressing influence on the patient; and the prolonged vomiting which so often follows, in spite of the preparatory starvation, tends still further to lower nutrition by postponing mouth feeding, besides adding greatly to the patient's distress. Some patients, too, have a great horror of being rendered unconscious. Local anæsthesia, by the application to mucous membranes of strong solutions of cocaine or some of its allied substances, with or without adrenalin, is of easy application and of eminent value in the case especially of the eye and of the nose. Weaker solutions of these substances are of very real value and of wider applicability by the local infiltration method, and also by the nerve-regional method. But the recent work of British and other surgeons[2] has opened a wide field for the practical production of peripheral anæsthesia by the very efficient means of intraspinal injection, a method of great promise, but which appears at present to have anatomical limitations to the lower half of the body. Its more general adoption will doubtless tend to foster rapidity and gentleness in operating, and thus to prevent their opposites. Whether electricity will provide a means for still more ideal methods of anæsthesia it is too early to judge.[3] Something better than the use of morphine is to be desired for overcoming, or preferably preventing, the after-pain attendant on large cutting operations. Very much has already been gained in this direction by antiseptic methods and something by the administration shortly before operation of hypnotics, especially those of the amide group, but still the first 24 hours after a severe operation is usually far from being a comfortable period.

Hæmorrhage.—The improvements in the prevention of hæmorrhage are certainly amongst the most important that have been made in technical details within my experience. It was after I commenced practice that the Spencer Wells pressure forceps came into use[4] and quickly supplanted the spring artery forceps, the "bull-dogs," and the sliding-catch torsion forceps of that day. Since then they have held their own and seem likely to do so, for they leave little to be desired for efficiency and general applicability. By their use hæmostasis is rapidly effected by pressure, and in the majority of operations hæmorrhage may be almost entirely prevented by their application before the division of each vessel, thus not only saving blood and preventing shock, but also keeping the operative field free from troublesome and dangerous obscuration. Compression, torsion, and ligation are readily effected by their aid, though for the last purpose the fenestrated modification is to be preferred. To be satisfactory, however, they must be numerous, and the small number supplied in some of the instrument cases made for

[2] See A. E. Barker, Brit. Med. Jour., 1908, vol. i., p. 244.

[3] See W. Deane Butcher: Proceedings of the Royal Society of Medicine, Electro-Therapeutical Section, vol. i., p. 1.

[4] His first published description of them appeared in the Brit. Med. Jour., 1874, vol. i., p. 47. See also Brit. Med. Jour., 1879, vol. i., p. 926.

use on passenger ships seems dangerously inadequate when one remembers that a dozen or more pairs are often needed at an operation. The use of the elastic band, after elevation of the limb, in place of the old screw tourniquet, is also a most valuable means for the prevention of loss of blood in amputations and for securing a clear field of view in the removal of foreign bodies, and in certain other operations on the extremities, though in others it is contra-indicated in consequence of the oozing which is apt to ensue.

Shock.—With regard to the prevention of shock, the analgesia which results from the injection of nerve-trunks and other anæsthetic means and the saving of blood to which I have just referred constitute two of the most important measures. Warmth, or rather the avoidance of all causes of its loss, is another important factor in the prophylaxis of operative shock and one for which provision is more habitually made nowadays than formerly. But I fear that in nursing this is still insufficiently recognised as of prime importance. Hospital patients sometimes are chilled after their preparatory bath overnight and supplied with insufficient blankets to restore quickly their body heat; or similar chill results from the preparation of a large area of skin, and the patient does not get comfortably warm again before being placed on the operating table. Post-operative bronchitis in old people may sometimes be attributable to such a cause, though, like pneumonia, it is doubtless often chargeable to a foul state of the teeth and mouth or to an uncleansed inhaler or ether bag. In grave cases, and especially where serious loss of blood has already taken place, shock may be prevented or reduced by intravenous, subcutaneous, or rectal saline infusion. Celerity in operating, and especially that which depends not on reckless dash but on knowledge of what to do and where to go; on skill in clean cutting and in rapid and neat suturing; and on good judgment in not attempting more than the patient is well able to bear, is another factor in the prevention of shock and one which is of scarcely less importance now than in the pre-anæsthetic days, especially in operations performed under general anæsthesia on infants and on patients already suffering from sepsis or advanced disease of any sort. The last point I shall mention as prophylactic of operative shock is cheer. Apprehension and fear are most depressing agents and in all cases where the surgeon advises operative treatment he is morally bound to encourage hope. His personal character and influence here count for much, and it is even more important for the patient to have perfect confidence in the surgeon than it is for the latter to know it. But perhaps we are insufficiently alive to the terrifying effect on many a nervous patient of being brought into the operation room before being anæsthetised. This is a point that must not be ignored in deciding in individual cases between general and regional anæsthesia.

Sepsis.—The means for the prevention of operative sepsis and suppuration, so common in my student days that they were looked upon as almost inevitable, except in subcutaneous and in ophthalmic surgery, may be summed up in the one word, antiseptic. It is the method given to the world by Lord Lister, so clear in its principles, so universal in its applicability, so trustworthy in its results. The exclusion of living bacteria from the field of operation is effected on the one hand by washing them away or covering them up, and on the other hand by destroying their vitality by means of heat and of chemical substances. Washing forms the general preliminary preparation; heat is then trusted to for the sterilisation of instruments, gloves, cloths, swabs, dressings, and almost every article used; but for the skin and mucous membrane of the patient and for the skin of the surgeon chemical substances have to take its place, supplemented by a covering of sterile cloths or india-rubber gloves. These last form, I think, one of the most valuable of the comparatively recent improvements in aseptic technique. Quite equal care has to be taken in the preparation of the hands before the gloves are put on as is necessary without them, but they have the double use of protecting the patient against bacteria (especially the staphylococcus albus) lurking in the surgeon's skin and liable otherwise to be transferred to ligatures in the act of knot-tying, and of protecting the surgeon's hands from contamination by pathogenic bacteria from the mucous membranes or other infected tissues of the patient. They are thus equally valuable for operating and assisting, for dressing and examining, in septic and in aseptic cases; and the danger of septic infection from the hands if a glove be pricked or torn does not seem to be great if the glove be at once changed or the prick covered by a finger-stall.

Death.—The prevention of death is, of course, the most important of all the considerations that are constantly before the surgeon's mind and to which all others are subordinate. Hæmorrhage, shock, and sepsis being the three chief causes of operative mortality, it is evident that their prophylaxis is of prime importance. Carefulness and judgment are also always necessary, and we must never disregard the dangers that inevitably attend the induction of anæsthesia and the performance of any cutting operation. No operation can be undertaken without risk, though in most cases the risk is happily but small. In this, as in the practice of asepsis, we aim at perfection, well knowing that it is beyond our powers to insure its achievement.

PROPHYLAXIS IN SURGICAL DISEASES AND ACCIDENTS.

Eye.—Passing now from general operative prophylaxis to the consideration of surgical prophylaxis in particular diseases and accidents, we may take sympathetic ophthalmitis as an example that readily suggests itself. Since 1854, when, in a communication to the journal of this Association[5] the late Augustin Prichard, of Bristol, advocated the practice and recorded two successful cases, early extirpation of a badly-injured eye has been recognised as the only trustworthy means of preventing the occurrence of sympathetic ophthalmitis in its fellow; and, although treatment on antiseptic lines and by eliminants has so far advanced of late as to make immediate removal of the globe, in accidental wounds of the ciliary region, less generally necessary than formerly, it has not as yet been found safe to supersede excision by any other mode of treatment.

On the important but vexed question of the prevention of ophthalmia neonatorum, a disease which supplies a third of the cases in our blind schools, we shall probably all be agreed that much may be done in this direction by simple cleanly wiping of the lids and the avoidance of contact of the child's first bath water with the eyes, together with vigilant and continued care with regard to the use of sponges and all other articles likely to convey infection. There seems also to be little doubt that a skilled use of eye-drops of an appropriate silver-salt solution is a real and most valuable prophylactic against the development of the gonococcus when inoculated at birth. But there is strong divergence of opinion as to whether such active germicidal means should be taken universally or only where indicated by the presence of definite signs of infection in the mother or by well-grounded suspicion furnished by the condition, class, or history of either parent. Against the latter view it is urged by some that it is not enough to let the taking of vigorous prophylactic measures depend on the presence and judgment of a medical attendant and that it is among the class usually attended by a midwife only that there is the greatest need for their adoption.

It seems to me, however, that the universal and routine application of eye-drops by midwives would involve grave danger from sepsis, from traumatism, and from chemical irritation, and this not only to the eyes of children in danger of birth infection but to the eyes of all children alike. Such a practice may be wisely followed at lying-in institutions, where the class from which the inmates are drawn is one requiring special watchfulness and where highly trained observation and supervision are available to prevent mishaps. In private practice, on the other hand, where the accoucheur is a qualified medical man, he must, of course, be left free to exercise his own judgment in the matter. And where, as in this country, the advice of a doctor is so easily obtainable the midwife's duty in the matter might well be restricted to calling in medical assistance where the danger of ophthalmia appears to her to be definite or at the first appearance of disease in the child's eyes. Moreover, there is, I think, a serious moral objection to the proposal to adopt a line of practice which would lead the public to infer that the presence of the gonococcus is suspected in every family. Widespread as this microbe may be, such an estimate would happily be very far indeed from the fact, and I cannot but regard the counsel of the invariable instillation of eye-drops in the case

[5] Association Medical Journal, 1854, p. 909.

of every newborn child as a meddlesome and mischievous proposal.

Gonorrhœal ophthalmia in the adult is preventable by the observance of such strict injunctions as should be given by the surgeon in all cases of gonorrhœa, supplemented by the use of eye-drops. Small-pox is no longer, thanks to vaccination, a frequent cause of blindness in this country, but in Russia it is said[6] to be still responsible for more than a fourth of all cases of blindness, a calamity which might be prevented by more general vaccination.

Myopia can no doubt be largely prevented by intelligent school hygiene in the form of good light, large print, suitable posture, and proper distance of work. The exact correction of astigmatism by glasses which are worn all day long is an efficient and most valuable prophylactic against the headaches which so frequently result from that cause, and in the case of hypermetropia both eye-strain and strabismus may be prevented by the use of appropriate spectacles. Glaucoma is not, I am afraid, preventable by any definite and practical means, but the permanent blindness to which it so often, and in its acute forms so rapidly, gives rise may almost always be averted and prevented from becoming permanent by early iridectomy, and, as a temporary measure which every practitioner may easily adopt, the application of a myotic, such as eserine, is often most satisfactory. The great point here—as everywhere in our work—is early and correct diagnosis. How often is acute glaucoma, with its headache and vomiting, mistaken for a bilious attack, and efficient treatment delayed till the tragic result is too late discovered. Blindness may also, as we know, be prevented in the case of many irremoveable tumours of the brain by trephining the skull, by which means intracranial pressure is reduced, and not only is blindness prevented but headache is relieved and a fatal termination postponed.[7] How valuable has been the aid afforded here by the ophthalmoscope and how truly prophylactic its use!

Naso-pharynx.—Adenoids, like many other diseased conditions, appear to have their origin in the increasingly artificial circumstances of civilised life and to need for their prevention not only the early treatment of nasal catarrh and the general hygiene of fresh air (by open windows), proper food (not all pulpy), and the abolition of the bottle tube and the dummy-teat, but also more teaching in a practical manner of some of those physiological acts, such as nose blowing and nasal breathing, which perhaps come more instinctively to the less highly civilised. The early recognition and treatment of adenoids (not always operative) will often prevent the narrowing of the nares and palate, resulting both in irregular eruption of the teeth and in impeded nose breathing with its deleterious effects on the development of the chest, on hearing and articulation, and on nocturnal aeration of the blood with its resulting impairment of attention and memory. Where nasal stenosis is already present operative means may still be successful in preventing intractable suppuration of the nasal accessory cavities and its fatal extension to the meninges of the brain.

Teeth.—The teeth furnish another good example of what may be done by way of prophylaxis. Caries, so prevalent as to be found in over 95 per cent. of the mouths of our school children, may be largely prevented by proper cleansing of the teeth after every meal; toothache and alveolar abscess, by the early clearing and filling of carious cavities; indigestion and other troubles incidental to loss of teeth, by the application of artificial dentures; cancer, quite occasionally, by their removal; whilst many a case of oral sepsis and not a few of gastric ulcer and pneumonia might be prevented by more careful attention to the cleansing of the mouth and teeth, especially during fever and in bedridden patients.

Ear.—In the surgery of the ear we recognise the possibility of preventing the occurrence of chronic otorrhœa (or suppuration of the mastoid antrum) by early antiseptic treatment of suppurative otitis media, whilst, when established, it may still by one of the most valuable of prophylactic operations be prevented from setting up cerebral or cerebellar abscess, purulent meningitis, or septic thrombosis of the sigmoid sinus; and in this last condition again operation may prevent the occurrence of pyæmia.

Chest.—Referring to the chest, the prevention of its contraction and that of the affected lung after empyema depends mainly upon the early evacuation of the pus before the pleura becomes thickened and its visceral layer firmly fixed.

Abdomen.—The abdomen is now the happy hunting ground of the operating surgeon, and, as we might expect, it affords many opportunities for the exercise of preventive surgery. Gastric and duodenal ulcers and strictures at or near the pylorus are of common occurrence and frequently terminate fatally, whether by hæmorrhage, by perforation, by mechanical obstruction followed by malnutrition, or by the growth of cancer. These fatal results may in numerous cases be averted, as well as relief given to such distressing symptoms as pain, vomiting and inanition, by the operation of gastro-jejunostomy and similar procedures. Stones in the gall-bladder, themselves usually the result of the abnormal presence there of bacillus coli or other bacterium, are liable to cause hepatic colic and obstructive jaundice by passing into the common bile duct, and to induce cholecystitis or cholangitis by their continued presence; but both of these serious complications may be prevented by the recognition of the symptoms of cholelithiasis in an early stage, followed by the simple operation of cholecystotomy. Hernia affords a typical example of the benefit to be derived in the practice of surgery by prophylactic treatment. The dangers of neglected strangulation are now so generally appreciated in the profession that patients are commonly advised by their family doctor to accept the very slight risk consequent on an operation for cure during a quiescent period in order to prevent the very grave risk of strangulation. Indeed, the inconvenience and expense attending the life-long wearing of a truss are enough in themselves to make most subjects of hernia gladly accept an operation of such little danger in order to avoid them. A general acceptance of the saccular theory of the origin of hernia (supported as it seems to me to be by the excellent results obtained in the experience of so many surgeons by operations involving little more than excision of the sac) will probably lead to still further advance in the earliness with which operation is resorted to in all the usual forms of hernia. The prevention of ventral hernia as a result of laparotomy lies mainly in a wise planning of the incision, according to the needs of the case, and the obtaining of aseptic primary union throughout the wound, the scar of which must then be allowed time enough to become firm (six or eight weeks at least) before being subjected to any considerable strain. Where the conditions are favourable, probably suture of the divided structures in separate layers gives the best results, suture material being used which will not become too soon absorbed; but, where much tension is present and the peritoneum or the adjoining fascia tears and will not hold the sutures, it is safer to trust to through-and-through sutures of strong silkworm gut. Muscle-splitting instead of cutting is frequently a valuable expedient to adopt with a view to the prevention of ventral hernia. When drainage has to be provided for it is well, with the same object, to carry it out through separate incisions. A sufficient number of cases of intestinal obstruction are due to bands and adhesions which have resulted from former laparotomies to make it worth while by way of prevention to take every care when opening the abdomen to damage the peritoneum as little as possible, whether by rough handling, by stripping up, by long exposure to the air, or by contact with septic fluids or irritating chemical antiseptics.

Inflammation of the appendix is now so prevalent and so frequently of a dangerous type that it is hardly surprising that serious suggestions should have been made for its prophylaxis by the radical method of the universal removal in health of an organ of so little apparent use and possessed of such dangerous possibilities. Were its uselessness beyond question, were the operation for its removal attended with no more risk, expense, and other inconveniences than ordinary antivariolous vaccination, and were the incidence on the population of appendicitis anything approaching that of small-pox among the unvaccinated, the suggestion might deserve our careful consideration, though the analogy between the two cases is far from being a close one; but none of these propositions can be accepted as true. Two other suggestions of definitely restricted applicability have been made for the removal of the uninflamed appendix. One is that it should as a rule be amputated whenever in the course of

[6] See Encyclopædia Medica, vol. i., p. 511.
[7] See Victor Horsley: Brit. Med. Jour., 1890, vol. ii., p. 1286.

an operation it is exposed and is judged from its appearance or from its proximity to diseased structures or to parts being operated on to be in more than ordinary danger of becoming inflamed. The other is that its removal should be effected during the quiescent or interval stage when an attack of appendicitis has been recovered from without operation. Both these suggestions seem very reasonable, and I, in common with others, have frequently acted on them. But with regard to the second suggestion, let us note that in order that this line of treatment may be carried out it is necessary that the patient should survive the illness. Herein lies the chief weakness of the position—not, indeed, the sole weakness, for another weak point is not infrequently found in the unwillingness of the patient who has gone more or less favourably through a first attack to face again, and this time in cold blood, the loss of time and money, the discomfort, and the inevitable though very small risk attaching to the operation. But the chief weakness of this plan of treatment is, I repeat, that it is quite problematical at the beginning of an attack, whether or not the subject of it will ever reach the interval stage. A high rate of mortality appears to prevail at present in this disease. Who of us has not seen cases die whilst waiting for the quiescent period in which to operate? Is it not time that we learnt the lesson of the uncertain course of any, and especially of a first, attack of appendicitis? The interval operation is a most excellent one when that stage is present. Its mortality is so low that many operators can show long series of cases without a death, and the recoveries are usually rapid and perfect. But ought we to wait for the interval? I think not, especially in a first attack, if a positive diagnosis of appendicitis can be made sufficiently early to allow of operation being performed within 24 hours of the onset of the symptoms. And this should not be difficult in a very large proportion of cases. The suddenness and severity of pain and other symptoms are in most instances, though certainly not in all, sufficient to induce the patients or their parents to send early for medical advice. And the signs of acute peritonitis, and usually of its location in the right lower abdomen, are not easily overlooked or mistaken, whilst the cases are comparatively few, except in women, in which any other organ than the appendix is the cause of acute local peritonitis. The diagnosis made and the abdomen opened within 24 hours of the initial symptoms in a first attack gives the patient, I am convinced, the best possible chance for rapid and permanent recovery, whilst by this early removal of the offending appendix he is insured against the unknown risks of its present inflammation and is safeguarded from any attack in the future. The mortality attending operation in this early stage appears, as far as can be judged from the comparatively small number of series of cases hitherto published,[8] to be almost, if not quite, as low as that of appendicectomy during the interval stage, and any difference there is may probably be less fairly attributed to the stage at which the operation is performed than to the fact that in the immediate operation series there will be included those unfavourable cases which would under no other treatment have survived. The objection to operating on a subject of septic fever is, I think, fairly met by its being almost certainly possible at this early stage to remove the appendix in the simple manner in which it is removed in the quiescent stage, and thus to rid the patient of his septic focus. Within 24 hours (and the more this period can be reduced the better) we shall find no widespread recent adhesions, no pus, or only a minute quantity, no perforation, nor any such degree of gangrene as to interfere with complete removal of the organ, and if it be a first attack we shall meet with no difficulties caused by old and firm adhesions. The result is that the patient's illness is cut short; he and his family and medical attendants are saved from the fear of abscess and other complications, the anxiety with regard to the issue is soon relieved, and there is no looking forward to a second operation in the future.

Now let us contrast with this what is so often allowed to happen after inflammation of the appendix has been early and correctly diagnosed. In one class of case the patient is not very ill, and, after a single dose of morphine, is treated by the expectant method. By the third or fourth day his temperature falls to normal, but a few days later it again rises, and it soon becomes evident that an abscess has formed about the appendix. As pain and fever increase, a consulting surgeon is now for the first time called in. The abscess is drained and the patient probably gets well quickly, but, unless the appendix has been removed, he has still to submit to a further operation a little later or to remain possessed of a damaged and dangerous organ. In another class of case the patient is very ill and in great pain from the first, and is unwisely treated with regularly repeated doses of morphine for two or three days. His pulse then runs up, and the recurrence of other unfavourable symptoms leads to the surgeon being now called in. As the case is urgent he operates at once, but only to find a gangrenous and perforated appendix with spreading or generalised peritonitis. With free drainage and rectal irrigation in the raised posture the patient may perhaps recover, but it is a terrible experience for all concerned. In yet other cases various dangerous and often fatal complications arise. Pelvic, lumbar, or subdiaphragmatic abscess may occur; the uterine appendages may become infected; portal pyæmia or intestinal obstruction may be set up. In a much larger proportion of cases, however, good recovery no doubt takes place, but even then the subject of the illness may well feel concerned at the uncertainty of his prospects, and sometimes at his being refused by a life assurance office, till the lapse of years or a successful appendicectomy has diminished the risk on his life. I do not maintain that the removal of every inflamed appendix during the first 12 or 24 hours of its first attack is an altogether ideal method of prophylaxis against complications and recurrence; but I am convinced from my own experience that it is an efficient method and the safest and best that is at present practicable. We may look forward to the time when such advances may have been made in its etiology as to provide a less clumsy means of preventing inflammation of the appendix than its amputation; but that time is not yet.

Pelvis.—Passing on to the urinary organs we find ample scope for prophylaxis. Sepsis here is so serious and so difficult to avoid that it behoves us to exercise every care and to adopt all practicable precautions against carrying infection into the bladder and beyond by our instruments. Disinfection of such catheters as would be spoilt by boiling can be effected by the vapour of formaldehyde, by means of special apparatus, and the internal exhibition of the ammonium derivative of this substance (hexa-methylene-tetramine) seems to be of very real value in the prevention of infection of the urinary passages. A method of preventing septic cystitis in cases of fractured spine which has seemed to me useful in a few cases is that of performing suprapubic puncture of the bladder, and leaving in a metal tube for permanent drainage. In this sad accident there seems no sufficient reason why the sufferer should be deprived of the ordinary preventive measures taken by nurses against bedsores, since no amount of fixation and rest suffices to induce nature to restore function to a crushed spinal cord. The danger, in prostatic retention, of completely emptying by a catheter a bladder which has for months harboured a considerable quantity of residual urine is not, perhaps, as widely known as it ought to be for the prevention of a fatal result through blood-vascular disturbance of the kidneys. The prevention of the risks and inconveniences of catheter life can usually be secured with comparatively little danger by the modern operation of suprapubic prostatectomy; and, generally speaking, the occurrence of pyelonephritis may be prevented by the reasonably early and efficient treatment of stricture of the urethra, enlarged prostate, and stone in the bladder. The cystoscope is a great prophylactic. Many a useless operation on bladder or kidney might be prevented by its more general use. Here, again, the septic risk should be borne in mind of washing out a bladder affected by new growth.

With regard to the ovary and uterus, it is notable how rare are now cases of advanced ovarian dropsy which were so common in my student days. That distressing condition has been prevented by the much earlier and almost uniformly successful removal of ovarian cystoma in an early stage. What a happy contrast to the state of things, which I well remember, when ovariotomy was so dangerous that cases were left till the abdomen was enormously distended and its contents and those of the chest dangerously pressed upon

[8] See A. H. Burgess, Ibid., 1908, vol. i., p. 188; and F. A. Southam, THE LANCET, Feb. 15th, 1908, p. 491.

before that operation was resorted to, or were tapped and retapped till sepsis closed the scene. Similarly the long, disabling invalidism of woman's life, whilst waiting for the menopause in menorrhagia due to myoma, is now prevented by earlier operation, whilst by the same means she is saved from the dangers of the degenerative stage of that disease.

Extremities.—Turning to the extremities, we may contrast the large proportion of amputations performed for diseases of the joints and for compound fracture 40 years ago with the prevention of such loss of limbs since brought about by antiseptic treatment. We see also with satisfaction how much the period of disabling stiffness of joints and wasting of muscles after fracture has been curtailed by modifications and improvements in the form and application of splints and by the practice of early movement of joints and of massage, and how in many cases limbs presenting fractures which could be but very imperfectly dealt with by means of splints alone may be restored to functional perfection with the additional aid of wire or screws. By such methods of treatment long-continued, or even permanent, disability is prevented. In wounds of the forearm and other parts much functional disability can often be prevented by careful suture of divided nerves and tendons—a method which has a further application in preventing the permanence of some of the effects of peripheral paralysis. Gangrene of the foot may, by early amputation above the knee, be in most instances prevented from running a fatal course. And recently there have been recorded brilliant attempts to prevent the onset and spread of gangrene—in one case by removing an embolus from the bifurcation of the aorta, and in another by anastomosing the proximal end of the divided femoral artery to the distal end of the divided femoral vein.[9]

Cancer.—The prevention of cancer cannot reasonably be expected till much more is known than at present as to its real cause or causes; but we may well indulge the hope that some means of prophylaxis will ultimately result from the patient investigation which is now being carried on as to the nature of this dread disease. What we can do at present is, with respect to the public, to educate them not to regard pain as the *sine quâ non* of cancer, or as the only important thing in life to avoid, and not to neglect any definite and persistent symptom of abnormality or ill-health, be it lump, sore, discharge, hæmorrhage, or anything else; and, with regard to ourselves, to look suspiciously on all new growths, however innocent they may appear; to neglect no rectal or other internal examination that may be indicated by the symptoms; to regard ulcers of the tongue and lips, vulva, and prepuce as having a precancerous stage, most suitable for operation; to consider all growths in the adult breast, bladder, and rectum as at least potentially malignant; and, until better methods of treatment are known, to advise, as an almost invariable rule, the anatomically complete removal of all cancers diagnosed early enough to give good hope of success. In such ways we may hope to often prevent recurrence, and occasionally we may do something more truly prophylactic, as by treating the superficial glossitis produced by syphilis or by tobacco smoke, by stopping the use of an unwaxed clay pipe, by removing gall-stones, by excising pigmented moles and senile warts, or by performing circumcision on child or adult. Every case of epithelioma of the penis that I have ever met with has furnished a history of pre-existing phimosis.

Syphilis.—Of syphilis and venereal disease in general, let me say that the true prophylaxis lies in

"Self-reverence, self-knowledge, self-control,"

combined with a due regard for the inalienable rights and deepest interests of others, the claims of the weak and the dictates of honour. I do not forget that syphilis is sometimes acquired in a non-venereal way, as by members of our own profession in the faithful discharge of their duties. To those who thus suffer on behalf of their patients our sympathies go out, and for them and for the vast number of other innocent victims of man's inconsiderate selfishness we may heartily wish whatever benefit may be derivable from the experiments in inoculation with the treponema pallidum, which for the last three years have been so arduously carried on by Professor Neisser and his staff.

Suicide.—Similarly with regard to cut-throat and other forms of suicide, so shockingly prevalent at the present time, we need, as the true preventive, higher ideals of life, such occupation and recreation as will make life of more value both to its possessor and to those who come under the influence of its example, a truer, more grateful, and more hopeful estimate of the worth of human life, a wider and a deeper experience of

"The mighty hopes that make us men."

But here again we must remember that in many a case the usual verdict of "temporary insanity" may go nearer to the truth than the outward circumstances of the case may seem to warrant.

THINK PROPHYLACTICALLY.

The field of surgical prophylaxis is indeed a large one, and even such a brief and fragmentary glance at it as we have been taking may help us to realise something of its wide extent and to consider it more habitually worth our while to think prophylactically. Hæmorrhage, shock, and sepsis are already largely preventable in our operative work, but a grave mortality still results from the impaired vitality of the patient at the time when, in too many instances, operation is first considered. It is here, we may be confident, that improved practice will insure better results, as is abundantly evidenced by the lowered mortality attendant on such abdominal operations as herniotomy, ovariotomy, colotomy, and appendicectomy, when undertaken early enough to prevent the effects of commencing strangulation, torsion, obstruction, or inflammation. It is on the family surgeon that the chief responsibility must rest to be early in his diagnosis where prevention seems the rational treatment to attempt, whilst, with the same object in view, the essential requisite in the diagnosis of the consultant is exactness.

The diseases to which we as a profession are said to be specially liable are such as are traceable to overwork and strain. May they not be largely prevented by our taking one day's rest a week, as regularly and as fully as the interests of our patients admit, and a longer holiday once a year? By all means, let us attend to necessary work on Sundays just as on weekdays; but our patients have no right to put extra work on us on that day merely to suit their own convenience and with a disregard of the fact that it is often the only day in the week when a busy doctor can get a quiet afternoon. Why should it be supposed that he is more exempt than others from the need for periodical rest for his body and refreshment for his soul?

There is also a mental condition which we must try to prevent at least as much as strain, and it needs our constant effort to prevent rustiness in our knowledge and failure in our attempt to keep up with the advances made in our profession or in the particular branch of it that we practise. The value of hospitals and of universities, of post-graduate courses and of medical societies, of books and periodicals, of annual and of branch meetings of this great Association, and of the various opportunities we all enjoy for social and professional intercourse is indeed great in warding off this deplorable state of mind and in making our professional life hopeful and happy to the end.

Prophylaxis is always full of hope. It is founded on early and correct diagnosis, together with the prognosis which is the outcome of knowledge and experience and which enables us to prophesy because we know. But in much of our surgical work to foretell should be to forestall. We need to recognise what is ahead of our patients, to provide for the emergency, to anticipate the complication, to avoid the danger. Pessimism and despair, born of ignorance, can lead but to disaster, whilst optimism and hope must always be right when founded on knowledge and insight. "Your intelligence," says Ruskin, "should always be far in advance of your acts." We must set before ourselves an ideal, true to nature, but too high for immediate and habitual attainment, that so both our individual and our collective work may be more worthy of our calling and that our art may be more hopeful and more helpful to suffering humanity.

"Not failure but low aim is crime."

We must long for real progress, but if we would attain it

"Our lives must climb from hope to hope
And realise our longing."

[9] See W. S. Handley, Brit. Med. Jour., 1907, vol. ii., p. 712, and C. A. Ballance, Proceedings of the Royal Society of Medicine, Clinical Section, vol. i., p. 199.

SOME BLOOD CHANGES IN ANKYLOSTOMIASIS.

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THAT the anæmia in cases of ankylostomiasis is due to the presence of a toxin is now generally acknowledged, and it appears probable that the eosinophilia is, in a way, a measure of the amount of toxins circulating in the blood—the function of the eosinophiles is probably the formation of an antitoxin. While in Egypt I made a number of differential counts on adult natives who were suffering from the disease, and as the results, especially as regards the eosinophiles, differ from the European ones, appended is a list of 40 which may be of interest. In the accompanying list 300, 400, or 500 leucocytes were counted.

An analysis of these counts shows that the average percentage of the eosinophiles is small compared to the European percentages, and also that there are none of those high eosinophilic counts which have so frequently been described. The average percentage is only 10 per cent. and the highest individual count is 36·75 per cent. Is there any possible explanation of this? Most of, if not all, the poorer Egyptians suffer from old-standing bilharziosis and this is known to be associated with an eosinophilia. It appears possible, and in fact probable, that they are in a state of tolerance to toxins of a certain nature; and consequently in case of an increase in the amount of toxins circulating in the blood the reaction—i.e., the eosinophilic change—would not be so great as in those who had never suffered from a previous toxæmia of a similar nature.

Guernsey.

Number.	Red blood corpuscles per cubic millimetre.	White blood corpuscles per cubic millimetre.	Hæmoglobin.	Colour index.	Polymorphonuclear leucocytes.	Large hyaline.	Lymphocytes.	Eosinophiles.	Myelocytes.	Mast cells.
1	3,208,000	5,600	45	0·7	83·00	5	7	5	—	—
2	2,300,000	28,125	32	0·69	38·75	7·5	15·5	36·75	—	0·75
3	2,200,000	9,200	24	0·545	74·4	2·8	17·2	4	0·4	1·0
4	3,755,200	12,600	48	0·64	63·6	2	26	8	—	—
5	892,000	9,208	About 8	0·44	81·5	2·5	13·5	2·5	—	—
6	1,025,000	10,200	9	0·45	67·25	2·25	10·25	14	6	—
7	2,020,000	12,200	20	0·5	68·75	4	22·25	8	—	0·25
8	2,468,000	12,600	30	0·62	68·4	3·4	17·6	10	0·2	0·4
9	1,700,000	12,187	12	0·35	67·5	4·5	15·4	10·5	1·6	0·6
10	2,345,000	12,187	29	0·62	71·2	4	12·8	10·1	0·3	0·7
11	3,175,000	8,400	40	0·64	59·6	3·6	24	12·4	0·2	0·2
12	2,844,000	17,600	31	0·62	77·2	6·4	10·8	2	—	—
13	1,597,500	6,289	15	0·5	71·4	3·6	17·6	8	0·4	—
14	1,252,000	18,280	12	0·5	60·5	5	23·5	15·0	0·5	0·5
15	1,226,000	9,200	14	0·58	66·4	4	20	8·4	0·4	0·8
16	1,860,000	11,000	20	0·55	60·4	4·4	23·6	8·6	1	1
17	1,570,000	10,000	16	0·53	58·75	4·25	23·25	10·5	0·25	0·5
18	4,490,000	10,625	88	0·99	55·75	1·75	27·5	13·75	0·5	0·75
19	1,561,200	10,800	15	0·5	61·00	6·2	21	11·4	—	0·4
20	2,080,000	9,000	22	0·55	79·6	3·6	14·00	2·4	—	0·4
21	2,400,000	8,125	30	0·62	72	6·5	16·0	3·5	—	0·5
22	1,625,000	10,525	20	0·62	60·5	4·5	25	10	—	—
23	1,638,000	19,200	14	0·43	62	6	19·2	10·8	1	1
24	2,160,000	10,600	20	0·46	66	3·2	12·8	16	—	2·0
25	2,025,000	10,000	23	0·57	68·75	3·25	21·5	6·5	—	—
26	2,960,000	13,200	33	0·57	44·8	8	29·6	16·8	—	0·8
27	4,792,000	10,200	86	0·90	67·4	3	19·4	8·4	0·8	—
28	4,250,000	9,200	65	0·77	60·5	2	27·5	9·5	—	0·5
29	2,038,000	12,800	17	0·42	66·5	2·5	18·5	12	0·5	—
30	3,950,000	6,000	54	0·69	61	4·6	19	13·8	—	1·6
31	1,500,000	10,200	16	0·53	66·5	4	21·25	12·25	—	0·5
32	1,512,000	11,200	15	0·50	72·8	4·4	16	6·8	—	—
33	3,883,300	10,600	55	0·72	65	4	22	8	0·5	0·5
34	2,600,000	8,000	25	0·57	70	7	12	10·5	—	0·5
35	1,062,160	20,600	10	0·50	75	3·6	18·2	2·8	—	0·4
36	2,360,000	10,800	19	0·40	60·8	5·6	26	6·8	—	0·8
37	1,962,000	19,062	22	0·57	76·5	2·5	17	2·5	—	1·5
38	2,260,000	7,000	27	0·61	65·2	4	14	15·4	0·4	1·0
39	2,692,600	13,000	27	0·50	60	7·6	18	12	1	1·2
40	3,155,200	10,000	44	0·70	66	2·6	16	14·4	1·0	—
Total ...	94,383,860	465,613	1152	23·165	2646·2	169·6	751·7	400·05	16·95	20·05
Average...	2,359,596	11,640	28·8	0·59	66·15	4·24	18·79	10·00	0·42	0·50

1. Only seven ankylostoma worms were present. 2. This was the highest eosinophile count found. There was also a large increase in the leucocyte count. 3. Unusually large number of small nucleated red cells were present. 4. 0·4 transitional. Many nucleated red cells were seen. 5. It was impossible to estimate accurately the hæmoglobin as it was so small. Extreme variation in size and shape of red cells. Very numerous blood platelets. Fatal case. 6. Fatal case. There was marked variation in size and shape of red cells. Platelets very abundant. 10. 0·9 transitional. 12. A large number of platelets present. Patient had pellagra and recent and old bilharziosis. 13. Many nucleated red cells present. Much alteration in size of the non-nucleated red cells. 15. Marked tendency to degeneration in the leucocytes. 16. 1 per cent. transitional. 17. Six transitional cells were counted in 400. 18. A mild case. 12 worms only; no bilharzia present. 19. One transitional cell seen. 21. Two transitional cells in 400. 27. 1 per cent. transitional. 31. 1·5 transitional. 35. There was marked œdema present. Much alteration in size and shape of red cells. Platelets abundant. Fatal case. 39. 0·4 transitional.

A CASE OF CARCINOMA OF THE JEJUNUM; WITH REMARKS ON MALIGNANT DISEASE OF THE SMALL INTESTINE.

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THE patient, a female, aged 38 years, was admitted into the Cancer Hospital, Brompton, on March 9th, 1908, and gave the following history. Ten months previously she had been confined and three days later had noticed abnormal abdominal pulsation. She had called the attention of her medical attendant to it and he had discovered an abdominal tumour and had sent her to St. Bartholomew's Hospital where an exploratory incision was made, but it was found impossible to remove the tumour. The swelling had caused her more or less constant pain in the abdomen and some difficulty in micturition, but no rectal symptoms. Since the birth of her child she had had amenorrhœa and had been gradually losing flesh. There had been no vomiting. The patient was pale and anæmic and looked ill. The abdomen showed a marked tumour and there were some dilated veins visible in the skin. On palpation most of the abdominal cavity was found to be occupied by a large, firm, bossed swelling, the exact extent of which it was difficult to determine. It consisted chiefly of two marked prominences on each side of the umbilicus, the one on the right side receiving strong pulsations from the aorta and common iliac arteries. The tumour extended almost as far as the costal margin and on the left side nearly filled up the loin. It did not appear to dip down into the true pelvis. The most prominent parts of the swellings were dull on percussion and the rest of the abdomen gave a note of modified resonance. The flanks were resonant. There was a well-marked sulcus to be felt between the two prominent masses and here the abdomen was softer to the touch than elsewhere. The tumour appeared to be absolutely fixed by its deeper parts, but there was a slight lateral mobility to be made out on grasping the superficial parts of the growth. Per vaginam the uterus was anteverted, moveable, and quite distinct from the abdominal swelling and the latter did not depress the vaginal fornices. The urine was acid, with a specific gravity 1030, and it contained some albumin. The patient was kept in bed but was allowed up for an hour or so in the evening. On March 12th she complained of some pain in the left side during the morning, but got up in the evening as usual. Suddenly whilst walking about she was seized with very acute pain in the left side, chiefly in the upper part; she became very collapsed and vomited. On examination the abdomen was found to be rigid, especially the left upper part, and very tender and immoveable on respiration. The temperature was normal, but the pulse was 130 and the respirations were 30, and both the latter were increasing in rate. The vomiting persisted. It was obvious that some abdominal catastrophe had occurred and it was thought that either the bowel had ruptured at its attachment to the growth or that a perforation of the stomach had taken place.

Although the prognosis was very bad, at 9.30 P.M. I opened the abdomen in the left semilunar line above the umbilicus. On dividing the peritoneum an enormous growth was encountered matting together nearly all the contents of the abdomen. The tumour was firmly fixed at its base, and to it the greater part of the transverse and descending colon was so intimately adherent that it was not possible to lift any of it into the wound. No perforation could be seen or felt, so the wound was enlarged upwards and an attempt made to bring the stomach into view. This also was impossible, but from behind the cardiac end of the stomach about a pint of turbid, inoffensive fluid welled up. This was mopped up with swabs, and as it was hopeless to try to find the perforation two large drainage tubes were inserted into the cavity whence the fluid came; one from the original wound in the anterior abdominal wall and a second from a stab wound made in the left loin. The abdomen was rapidly closed, as the patient's condition did not admit of any delay. She was much collapsed after the operation and hardly rallied, although stimulants were freely given both by the rectum and hypodermically. On the following day it was obvious that the patient was dying; the pulse was over 160 and the respirations were 40. Vomiting persisted and at times appeared to be becoming fæcal in character. She died at 6 P.M. on March 13th.

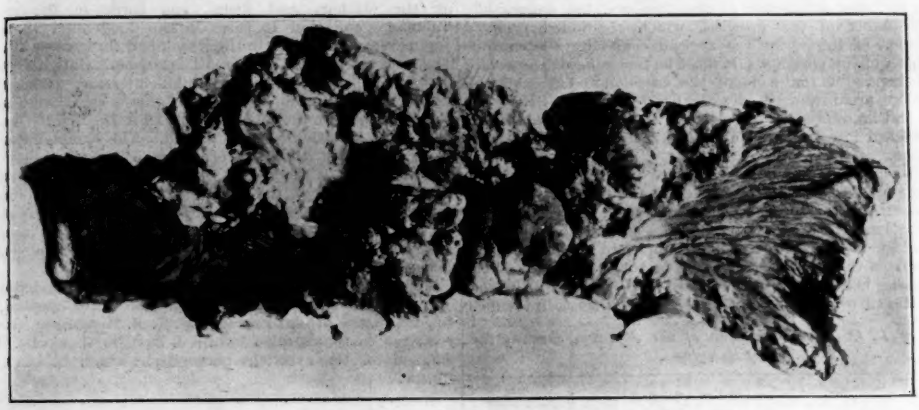
Dr. Alexander Paine, director of the pathological department of the hospital, conducted the post-mortem examination and found the condition of affairs to be as follows. On opening the abdomen the small intestine was seen to be intensely injected and the separate coils adherent by inflammatory lymph. About three or four ounces of sanious, purulent fluid had collected in the pelvic basin, and bands of easily friable lymph were stretched between the abdominal viscera and the parietes, the result of septic peritonitis. In the middle line was a large tumour in front of the spine occupying the middle of the epigastrium, appearing as a rounded irregular swelling with a nodular surface, just below the transverse colon. The omentum did not cover it since the latter structure was drawn over to the left side. The tumour was of the size of two closed fists and was directed rather towards the right of the middle line. On the left of the middle line was a second mass or tumour of the size of a small cocoanut situated in the left hypochondrium just below the stomach and posterior to the colon, which ran over its upper margin. This was rather smooth on the surface and was attached behind to the body of the pancreas. Its inner margin was attached firmly to a fluctuating mass of the size of a large cocoanut which was situated in the lateral aspect of this region just below the stomach and spleen. The walls of this mass were very thin and rapidly broke down. On dissection it was found to be the first portion of the jejunum, the lumen of which was distended but not obstructed by an extensive growth several inches in length covering the inner surface. Although it was not possible to discover anything of the nature of a small opening this was probably the seat of peritoneal infection (septic). No further evidence of growth was found in the abdomen. (Figs. 1 and 3.) The stomach was markedly distended and together with the liver, which was enlarged and fatty, plus masses of growth pushed up the diaphragm and encroached on the thorax to some extent. Microscopically, the growth was a columnar-celled carcinoma of an atypical kind. Some of the cells were spheroidal in shape whilst others showed a transition between the two forms. In places the sections looked more like a mixed-celled sarcoma than a carcinoma, but Mr. S. G. Shattock, who very kindly examined the specimens for me, agreed with Dr. Paine that the growth was a columnar-celled carcinoma. (Fig. 2.)

Cancer of the intestinal tract is usually found at those points where there is a change in the lining epithelium of the canal, such as the junction of the œsophagus and stomach, the anus, &c., or where the canal is subjected to some form of irritation, such as the sigmoid colon and rectum, the hepatic and splenic flexures of the colon, or the cæcum. The small intestine, being a tube which is free from sudden bends and containing only liquid matter, is seldom attacked by carcinoma. Nevertheless, these parts are occasionally, though very rarely, the seat of cancer. Of the three portions of the small intestine—duodenum, jejunum, and ileum—the first named is much oftener affected than the other two; in fact, cancer of the duodenum alone is said to occur about as frequently as cancer of the jejunum and ileum together (Nothnagel[1]). The rarity of the disease, especially in the jejunum, may be judged from the following statistics. In 24 years from 1870–1893 inclusive there were 41,838 necropsies conducted at the Pathologic Institute of the Vienna General Hospital. Among these there were 3585 cases of carcinoma, and 343 of these were in the intestines. Seven occurred in the duodenum, ten in the ileum, and none in the jejunum. Leichtenstern[2] collected 757 cases of carcinoma of the intestines from living and post-mortem cases. Of these 13 were in the lower ileum, three in the middle ileum, and 17 in the duodenum. Muller,[3] from 1886–1891 at the Pathologic Institute of Bern, records 5621 post-mortem examinations and 521 cases of cancer of the intestines. Of these, nine were in the small intestines, six being in the duodenum. Brill[4] quotes a large number of cases of intestinal cancer

[1] Diseases of the Intestine and Peritoneum, English edition.
[2] [3] Quoted by Nothnagel.
[4] American Journal of the Medical Sciences, Philadelphia, 1904, vol. cxxviii., p. 224.

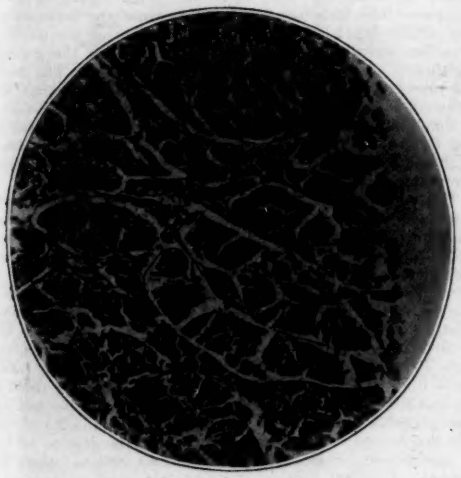
collected from various sources and finds that 2·5 per cent. occurred in the small intestine. A, Zemann [5] in 21,624 post-mortem examinations found nine cases of cancer of the small intestine, of which three were in the duodenum, six in the ileum, and none in the jejunum. C. Hemann,[6] whose statistics are quoted as being most reliable, records 1706 cases of carcinoma of the intestines. These were collected from those patients who died in the general hospitals of Prussia during the years 1895–96. 20 of these occurred in the small intestine. Lubarsch,[7] from necropsies at the Pathologic Institute of the hospital at Breslau, found 569 cases of intestinal cancer; two of these were in the duodenum and two in the ileum.

FIG. 1.



Primary carcinoma of the jejunum.

FIG. 2.



Primary carcinoma of jejunum, showing columnar and spheroidal cells, also transition forms. Microphotograph by Dr. T. J. English. × 200 diameters.

From the statistics quoted above only those from the Pathologic Institute of the Vienna General Hospital and Zemann mention cancer of the jejunum apart from cancer of the small intestine, but these alone indicate sufficiently the rarity of the disease, as out of 63,462 post-mortem examinations not a single case was found. Isolated cases of jejunal cancer are recorded, however, by Fagge,[8] Voelcker,[9] Mayo Robson,[10] Glynn,[11] Hammer,[12] and Notthaft.[13] Barnard, at the London Hospital, found two instances out of 481 cases of carcinoma of the intestines. From 1896–1907 inclusive only one case has been recorded at St. Bartholomew's Hospital. One case only has also been recorded at Guy's Hospital. Mr. C. W. Rowntree, of the Cancer Research Laboratories, informs me that during the last five years at the Middlesex Hospital 1169 cases of carcinoma have been investigated; these cases included only one of cancer of the jejunum. No cases have been recorded at St. George's, Charing Cross, or the Cancer Hospitals.

FIG. 3.

One of the secondary growths.

5 6 7 Quoted by Nothnagel.
8 Brit. Med. Jour., 1907, vol. i., p. 262.
9 Transactions of the Pathological Society of London, vol. xliv., p. 88.
10 Transactions of the Clinical Society of London, vol. xxix., p. 40.
11 Brit. Med. Jour., 1908, vol. i., p. 624.
12 Prager Medicinische Wochenschrift, 1896, Band xxi., p. 212.
13 Deutsches Archiv für Klinische Medicin, 1895, vol. liv., p. 555.

As duodenal cancer presents more or less special features both in pathology and symptoms, only carcinoma of the jejunum and ileum will be discussed in this paper. A considerable number of cases of cancer of the ileum have been collected and many examples of the disease can be found in the museums of the London hospitals. Bunting,[14] however, has recorded one and quoted six others which are of especial interest as there were multiple primary growths present. These cases were also characterised by their relative benignity, the small size of the tumours, the spheroidal-celled nature of the growths, which resembled primary carcinoma of the vermiform appendix, and by not causing the death of the patients. It must be remembered, however, that it is possible that some of the cases quoted as cancer of the ileum are instances of growth affecting the ileo-cæcal valve and therefore are classified by some authors as cancer of the large intestine and by others as cancer of the small intestine.

The symptoms of cancer of the small intestine are practically the same as those of the upper part of the colon—viz., pain, often colicky in nature, a tendency to constipation with occasional diarrhœa, anæmia, and later in the disease cachexia. Occasionally repeated violent hæmorrhages from the anus are seen. A tumour can be felt when the disease is advanced, but is most difficult to find in the early stages owing to the mobility of the small intestine.

Table of 12 Cases of Carcinoma of the Jejunum, showing the Chief Symptoms.

Age.	Sex.	Pain.	Tumour.	Vomiting.	Obstruction.	Remarks.
33	F.	—	Right iliac.	Yes.	No.	—
33	M.	—	—	—	No.	—
33	F.	Yes.	Left iliac.	—	—	Sudden perforation.
49	M.	Yes.	No.	Yes.	Yes, chronic.	—
33	F.	Yes.	No.	Yes.	—	Sudden perforation.
52	F.	Yes.	No.	—	—	—
35	?	Yes.	—	Yes.	—	—
36	M.	Yes.	Left iliac.	—	—	Sudden perforation
63	M.	Yes.	,, ,,	—	—	,, ,,
56	M.	Vague.	Left side.	Once.	—	Bowels open daily.
60	M.	—	—	—	—	—
38	F.	Yes.	Yes.	No.	No.	Sudden perforation.

When palpable it is, in the majority of cases, to be felt in the iliac fossa, most commonly the left, and not in the upper part of the abdomen (*vide* table). Vomiting is not uncommon but symptoms of obstruction are rarely seen, unless the disease is close to the ileo-cæcal valve. In my case and in one other (Barnard) the lumen of the gut was dilated; in any case the annular form of growth, which is so frequently seen in the large intestine, is rarely found. Sudden perforation of the gut with resulting peritonitis not uncommonly occurs, when death almost invariably follows. In several cases of carcinoma of the ileum where the symptoms were detailed the patients were admitted to hospital and died from some other disease, the neoplasm being found accidentally at the post mortem examination.

Age.—Out of 11 cases of carcinoma of the jejunum which I have collected the average age at which the disease was discovered was 43·9, but in six out of the 11 the age was under 40. In carcinoma of the ileum the average age seems to be a little higher; thus out of 13 cases the average age was 50.

Sex.—Cancer of the jejunum and ileum does not appear to occur with much greater frequency in one sex than in the other. Thus out of 11 cases of cancer of the jejunum six were males and five were females. In carcinoma of the ileum out of 14 cases eight were males and six were females.

Pathology.—The chief point of interest to be mentioned under this head is that the growth frequently shows spheroidal- as well as columnar-shaped cells. In some instances the growth is entirely spheroidal-celled. In others the cells are of such different shapes that the microscopical appearance resembles that of a mixed-cell sarcoma with alveolar arrangement of the cells. Sarcoma of the small intestine is not of such rarity as carcinoma and occurs about as frequently in the small as in the large intestine. In fact, cases of lympho-sarcoma preponderate in the small intestine. Nothnagel quotes the following: Out of 12 cases of lympho-sarcoma of the intestine one was in the duodenum, three were in the jejunum, four in the ileum, three in the cæcum, and one in the rectum. In Prague out of 13 cases of intestinal sarcoma occurring in 15 years seven were in the ileum, three in the jejunum and ileum, and three in the cæcum. Libman[15] collected 15 cases in the duodenum, 18 in the jejunum and ileum, 14 in the ileum, and three cases affecting the entire length of the small intestine. Out of 37 cases Krueger[16] found 16 in the small intestine. Corner and Fairbank[17] collected 65 cases; of these, eight were in the duodenum, 19 in the jejunum, and 29 in the ileum. In nine the exact situation was not stated. The symptoms are the same as those of carcinoma of the small intestine.

Treatment.—If the case is seen early enough or a growth is discovered during the performance of an exploratory laparotomy enterectomy and end-to-end anastomosis should be performed if this is possible. If symptoms of intestinal obstruction are present and the neoplasm is irremoveable a lateral anastomosis should be done.

For permission to publish this case I am indebted to Mr. F. Bowreman Jessett, senior surgeon to the hospital, and for the notes of the case to Mr. T. B. Henderson, surgical registrar to the hospital, while I have to thank Dr. T. J. English for the excellent photographs which he has taken for me.

Queen Anne-street, W.

[14] Johns Hopkins Hospital Bulletin, 1904, vol. xv., p. 389.

[15] [16] Quoted by Nothnagel.

[17] Transactions of the Pathological Society of London, vol. lvi., p. 20.

A NOTE ON THE TREATMENT OF ERYSIPELAS.

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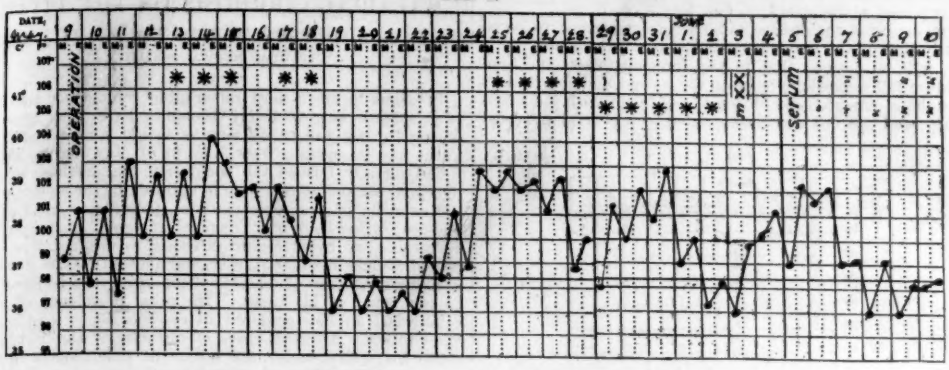
IN considering the methods of treating cutaneous erysipelas it is necessary to mention both the local and constitutional means of combating this infection. With regard to local measures very little need be said, because the recovery of the patient depends less upon the treatment of the infected area than upon the means adopted to increase the general resistance of the tissues against the disease. The local treatment may therefore be dismissed by saying that the infected part should be kept dry by dusting with powder; calomel, zinc oxide, and starch in equal parts were used in the following cases and this is usually cooling and welcome to the patient as it relieves the burning pain so commonly complained of.

The constitutional treatment may be medicinal only or combined with vaccination or the use of sera. Of vaccination in cases of erysipelas I have no practical experience and cannot therefore discuss its value; but the cases here outlined with their temperature charts speak, I think, in favour of the use of Metchnikoff's serum in this disease, especially when combined with the internal administration of quinine, stimulants, &c. The results of the use of antistreptococcal serum seem to me to have been variable, more striking with some patients than with others; and, while I am well aware that the following series of cases is too small to warrant any decided opinions, a further trial of Metchnikoff's serum seems justified by the similarity of the results obtained. In all the cases below the dose of serum is assumed to be from 40 to 50 minims, unless otherwise stated.

CASE 1.—The patient, a girl, aged one and a half years, was admitted into hospital for two large abscesses, one on each side of the neck, which were opened and drained on May 9th, 1907. (Fig. 1.)

Streptococcus pyogenes was grown in pure culture from the pus evacuated. On the 12th a severe attack of erysipelas manifested itself and spread rapidly to both sides of the face in succession, constitutional symptoms being marked. The chart shows that the temperature commenced to fall definitely about the third day from the commencement of

FIG. 1.

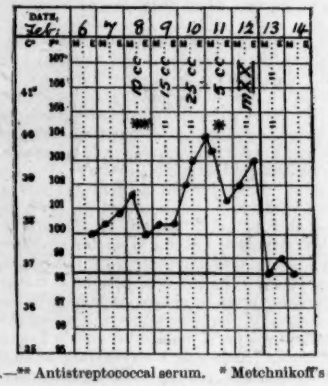


CASE 1.—* Metchnikoff's serum, 20 minims twice daily.

injections of Metchnikoff's serum, the local and constitutional symptoms simultaneously improving, so that by the 19th the temperature was normal and the child convalescent. The injections of serum were discontinued until another attack of erysipelas supervened, which again yielded to similar treatment, while recovery only finally ensued after the occurrence of two fresh infections treated in a like manner. These relapses are well shown in the accompanying chart with the doses of serum administered. From June 5th to 10th serum was given once daily instead of twice, but unfortunately the dose is not stated.

CASE 2.—The patient, a girl, aged five years and one month, developed erysipelas on the leg from a burn. The rash was well established on the calf and ankle on admission into hospital and spread up the thigh. The case was a severe one, characterised by continuous vomiting for two days, while the child's appearance indicated the gravity of the attack. (Fig. 2.)

FIG. 2.



CASE 2.—** Antistreptococcal serum. * Metchnikoff's serum.

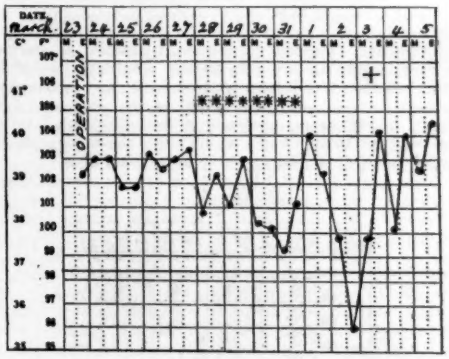
Antistreptococcal serum appeared to be of little benefit and Metchnikoff's serum was substituted with a favourable result. It is impossible to say to which of the two sera the rapid improvement was due, but the decided fall of temperature on the second to the third days after the commencement of treatment with Metchnikoff's serum presents enough similarity to the other cases to justify the assumption that the cure was largely due to the latter.

CASE 3.—The patient was a girl, aged 10 years and one month. A septic sore on the leg caused erysipelas on the calf. The disease spread up the thigh on to the buttock of the same side.

The child was brought to the hospital daily for the injection of a 40-minim dose of Metchnikoff's serum and the temperature was taken on each occasion except on the fourth day. The chart, which is not reproduced, signalled a steady fall of temperature accompanied by local and constitutional improvement. Complete recovery rapidly ensued.

CASE 4.—The patient, a girl, one year old, was admitted into hospital suffering from acute mastoiditis, following on chronic otitis media suppurativa. (Fig. 3.)

FIG. 3.



CASE 4.—* Metchnikoff's serum. + Symptoms of meningitis.

The mastoid antrum was opened and the "bridge" removed, the tympanum and antrum being thus laid open into one cavity. There was extensive caries and the pus was foul. Unfortunately, no culture was taken. The temperature did not fall and in two or three days erysipelas manifested itself round the wound and spread to the back of the neck and scalp on the same side. On referring to the chart it will be noticed that the temperature fell on the third day from the commencement of injections of serum in a similar manner to the previous cases. The child, however, developed a fatal meningitis which is shown in the chart. No necropsy was permitted but streptococcus in pure culture was obtained from the cerebro-spinal fluid by lumbar puncture after death.

CASE 5.—The patient was a girl aged nine years. This was another case of acute mastoiditis. (Fig. 4.) Operation was performed as in the previous case. Erysipelas of a particularly severe type set in and affected practically all the scalp and the face on each side in turn; both eyes were practically closed. The urine was porter-coloured; it was solid with albumin and contained a large quantity of blood. Recovery from both erysipelas and nephritis ensued under appropriate treatment combined with the serum injections. On the 6th there was only a trace of albumin in the urine and that soon disappeared.

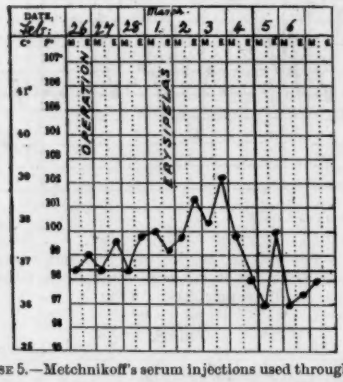
CASE 6.—The patient, a girl, aged three and a half years, was admitted to hospital for acute suppuration in cervical glands the seat of tuberculous disease. Erysipelas of the neck developed on the day after operation and spread to the face and forehead on the same side. The case was a very severe one and was accompanied by vomiting and marked

drowsiness, while food was persistently refused during the worst period of the attack. (Fig. 5.)

The course of the disease under serum treatment followed closely that of the previous cases and recovery ensued.

It will be noticed that in the foregoing cases the temperature fell somewhere between the second and fourth days from the commencement of serum treatment with some constancy, and this fall was accompanied by a general and local

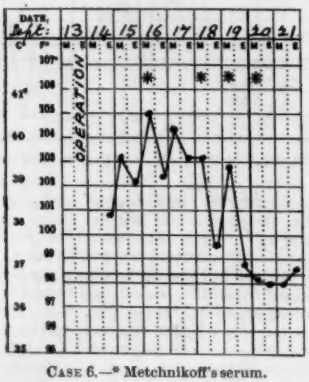
FIG. 4.



CASE 5.—Metchnikoff's serum injections used throughout.

improvement. It seems reasonable, therefore, to attribute the cure largely at any rate to the empirical use of the serum. In Case 2 the short trial of antistreptococcal serum appeared to have but little effect on the progress of the disease, which seems, however, to have responded in the usual way to Metchnikoff's serum; the chart suggests this only, without, of course, claiming to be proof of it.

FIG. 5.



CASE 6.—* Metchnikoff's serum.

Without wishing to under-estimate the value of anti-streptococcal serum I think Metchnikoff's is more constant in its effect in erysipelas, and, when the serious nature of this disease in young children is borne in mind, the results of its use in these cases are, it seems, successful enough to warrant a further trial of its value.

I wish, in conclusion, to express my thanks to those members of the staff at Great Ormond-street who have so kindly allowed me to use their cases.

THE BATH BOARD OF GUARDIANS AND VACCINATION.—The Bath board of guardians at its meeting held on July 22nd received a report from the finance committee recommending that the fees payable to the public vaccinator of the urban district should be reduced from 1*s.* 8*d.* to 1*s.* 3*d.* for visits, and from 5*s.* to 3*s.* 9*d.* for successful vaccination. After a long discussion the report was not adopted and an amendment that "the fees remain as at present" was carried by a large majority.

MALARIAL CIRRHOSIS OF THE LIVER.

BY A. J. B. DUPREY, M.R.C.S. ENG., L.R.C.P. LOND.,
TRINIDAD MEDICAL SERVICE.

IT seems to me a most remarkable coincidence that the very subject on which my thoughts have been engaged during the last five or six months should stare me straight in the face on opening THE LANCET of May 23rd (p. 1474). I had already formed the conclusion that cirrhosis of the liver and ascites as met with in children in the tropics were the outcome of a chronic malarial poisoning. Sir Patrick Manson, in his book on "Tropical Diseases," mentions the occurrence of hypertrophic cirrhosis as ensuing from repeated attacks of malarial fever, and quotes Dr. C. W. Daniels as finding evidence of diseases of the kidneys in no less than 25 per cent. of his cases. The great prevalence of this condition I am now prepared to corroborate, at least in the West Indies. Although cases of cirrhosis of the liver must come frequently under the notice of practitioners in the tropics, but few, I am sure, attribute the cause to malaria.

Until quite recently I, like many others, thought that the condition of these miserable, emaciated, pot-bellied little patients with very often albumin in their urine was the result of a toxæmia brought about by the absorption of poisons from the intestinal canal most probably generated by parasitic worms. I do not now wonder at the inevitable deaths which I have known to be the invariable finish of such cases. I think I am right in saying that they have been the despair of most practitioners. It is a very common thing to see in West Indian villages children showing more or less the appearances of the photograph reproduced on p. 1475 in THE LANCET. I have seen a considerable number of such cases in those islands which I have visited and I am certain that their malarial origin has not been appreciated and consequently their treatment has not been properly and scientifically carried out. It is but recently that I have suspected their malarial nature and have adopted a regular specific course of treatment. Little patients whom I had treated about a couple of years ago and in whose blood I had found the malarial parasite have this year developed interstitial hepatitis and ascites; it was a run of these cases that brought forcibly to my mind the actual causation of the disease.

Having treated now about 12 or more of these little patients I have no doubt about the malarial origin of their complaint. The disease is a slow fibrosis starting in the liver and spleen and finally ending in interstitial nephritis. It is the result of repeated attacks of malaria, especially when neglected, upon young, unresisting, and possibly badly fed subjects. I say possibly badly fed, because in one of the cases at least bad feeding could not have been considered as a predisposing cause, for the patient belongs to the better classes, and there is no doubt about his being properly fed. Adults undoubtedly suffer severely from acute hepatitis as a direct result of malaria but not to such a considerable extent and certainly not with anything like the permanent injury as do very young subjects, whose tissues are naturally far more vulnerable. I have not as yet met with a case of true malarial cirrhosis of the liver whose age was above 12 years.

The enlarged spleen of malarial cachexia I do not consider in this category. Although I am certain as to the malarial origin of these cases, and have treated them successfully on that assumption, I could never find any malarial parasite in the peripheral circulation. Nevertheless, there are other indications in the blood films of chronic malarial patients when treated with Leishman's stain that would point to the probability of malaria.

The large mononuclear leucocytes are usually much in evidence in chronic malarial poisoning and sometimes at the edges of a film they are seen to contain pigments. Even without this latter surety the increase of these leucocytes is a sure sign in malarial countries. The first glance at a stained blood film usually tells one accustomed to such examinations whether he is dealing with malarial blood or not. The blood corpuscles under a 1-12 inch oil immersion objective appear to be larger than the ordinary. In a fresh preparation they seem to be larger, swollen, and anæmic when compared with healthy blood and have much the appearances of having imbibed too much fluid from the surrounding plasma. It is, however, the characteristics of the

blood platelets in chronic malarial poisoning that call for special attention. They are larger individually and more distinct, although accurate description seems to be very difficult. They even approach to the size of an ordinary microcyte. At one time they are seen to possess a distinct limiting capsule with a radiating central stroma stained red by Leishman's process, and at other times they are simply a patch of red with fibrin filaments issuing from their several points. They form large irregular clumps, very characteristic, I think, of chronic malarial poisoning. There is the possibility that in all hydræmic states of the blood other than malaria the same appearances might be observed, but in malarial countries, when considered with a history of repeated attacks of fever and where no parasites are to be found, these characteristics might afford a valuable aid to diagnosis.

In only one instance I have had the opportunity, under extreme difficulties, of making a post-mortem examination. This was a sudden death of an Indian child of about six or seven years of age. The appearances were those of anæmia;

the abdominal cavity contained about two pints of serous fluid and both the liver and the spleen were cirrhosed. The intestines were pale and thin and some worms (ascaris lumbricoides) could be felt through the thin walls. More minute examination was impossible in the circumstances and I felt convinced that the child had died from the anæmia of dirt-eating or ankylostomiasis. On the subsequent examination of a couple of smears taken from the splenic pulp and stained by Jenner's method I found scattered clumps of pigments which could be no other than malarial in nature.

CASE 1.—On June 18th, 1907, I saw a boy, six years old, with cirrhosis of the liver and ascites. After paracentesis the edge of the liver could be felt hard and sharp, three fingers' breadth below the costal margin. The spleen though enlarged was not markedly so. I removed from the boy a small basinful of fluid amounting, as far as can be judged, to about six pints. More than a year ago I had found malarial parasites in his blood and had treated him; now he had the peculiar look of a chronic malarial subject and was attacked with occasional paroxysms of fever. I therefore treated him as for chronic malaria and he recovered perfectly. I then had the first suspicion of the real nature of cirrhosis of the liver being possibly malarial in origin and when I saw the next case I was convinced.

CASE 2.—The patient was a little girl, four years old, whom I saw on Feb. 8th last. She had an enormous liver, smooth and hard; the spleen could be easily palpated but was nothing compared with the size of the liver which reached to four fingers' breadth below the costal margin. There was ascites and the superficial veins of the abdomen were very prominent. Besides an occasional attack of "roasting" fever the child did not seem anything the worse for her condition; she ate and slept well. I was only called because "she was gathering water." Her face was pinched and the ribs protruded painfully. Her heart beats were regular but very excitable and thumping against the chest wall; the lungs were clear. I removed about three and a half quarts of serous fluid and she was much relieved thereby. She was treated and at first improved rapidly, so that after a month she was thought by her people to be cured and little attention was paid to her. Her father being engaged in the fields every day, she was consequently alone and neglected. I found that she had not been given any medicine for nearly three weeks. On March 17th I removed a basinful of ascitic fluid and found that the liver was reduced by two fingers' breadth. The child was tapped on April 4th and again on the 14th, when for the first time I noticed puffiness and swelling of her ankles. Her urine examined at the commencement had no albumin, but there was a difficulty in getting some now as she passed very little. She was again tapped on April 24th and the liver edge was found to be at the costal margin. Altogether she has been tapped ten times. The treatment is now only palliative and the case seems to me perfectly hopeless. This is the only case among a series that has turned out badly and I have little doubt that the neglect she suffered brought on her present condition.

CASE 3.—On Feb. 4th I visited a little Indian girl whom a year or so before I had often treated for malarial fever. She then had the parasites of malignant malaria in her blood, but although I made several examinations of her blood on this present occasion I could find no parasites or pigmented leucocytes. I felt, however, that her condition was purely malarial. She had a large liver and ascites. Her father objected to tapping at first but when on Feb. 15th the child was nearly dying from the accumulated fluid he consented; the abdominal wall was tense and shiny and I was certain the child could not have lived another 12 hours. I removed three-quarters of a gallon of bile-stained fluid with a few flakes of lymph in it. Her liver and spleen were enlarged, the former reaching to the level of the umbilicus. It was hard, smooth, and had a sharp edge. She suffered from fever occasionally and had abdominal pains. She was tapped five times in all and was at one time so bad that her people despaired of her recovery, but with dogged perseverance she was got through and now is quite well. The subsequent tappings brought out clear and ordinary ascitic fluid. Her ankles were never puffy or swollen and her urine though scanty was never albuminous.

CASE 4.—On Feb. 18th a girl, aged eight years, had fever, her temperature being 102° F. and her pulse 160. Her tongue was red in the centre and furred at the edges; there was some fluid in the right chest. The liver, palpated through the fluid in her abdomen, was half-way between the costal margin and the umbilicus. All these symptoms were relieved by treatment until March 26th, when I removed one and a half basinfuls of ascitic fluid from her. She improved rapidly after that.

CASE 5.—On Feb. 21st the patient, a boy, aged four years, had a pulse of 120 per minute, some evidence of fluid in his left chest, and ascites. The urine was scanty but not albuminous. Blood from his finger contained no malarial parasites. He was one of those children whom I had treated for malaria and whose parents are in easy circumstances. On the 24th the ascites seemed to have decreased from the treatment, so I persisted in it. His abdomen then measured 36 inches in circumference above the umbilicus. The liver dulness extended in the axillary line from the sixth rib to two fingers' breadth below the costal margin; it could be palpated through the fluid and gave the sensation of being hard and smooth. The spleen was enlarged and easily felt. On the following day the abdomen measured 4 inches less.

Urine was passed freely and had no albumin. The fluid gradually lessened and there was no tapping. He is now quite well.

CASE 6.—On April 10th a little girl, nine years of age, was brought to me with fever, enlarged liver, and ascites. She has not returned after that first visit, so I presumed she must have benefited by the treatment.

CASE 7.—A little girl, three and a half years old, was brought with fever, and the mother complained that her abdomen was swelling. She had an enlarged liver and a small accumulation of ascitic fluid. Her urine was clear and non-albuminous. She has improved rapidly from treatment.

CASES 8 AND 9.—Two children, girl and boy, of the same parents, were brought to my office on June 13th, both suffering from cirrhosis of the liver and ascites. The little girl, one and a half years of age, I tapped immediately and removed three and a half quarts of fluid. The boy, six years old, was subsequently tapped on June 17th. There were three children in this family who suffered from the same condition. One died without treatment, one died five days after tapping, and the other is improving.

It is evident that taken in time and with proper treatment the cirrhosis of the liver and even a fairly large accumulation of ascitic fluid as was present in Case 5 can be cured to a certainty. If the kidneys are affected, as shown by swelling of the ankles and albuminous urine, I should think that the disease has gone too far and that recovery is impossible. The danger of allowing too much fluid to accumulate is shown by the two deaths mentioned above.

Since this condition of cirrhosis of the liver and ascites is due to malarial poisoning the treatment must be evident. Quinine in suitable doses regularly administered is the sheet anchor. In combination with quinine I have used sulphate of sodium and tincture of iron. There is certainly no better, as I have found. Immediate improvement is obvious, even after 24 hours' administration. The liver is found to decrease in size; the urine flows more freely and the ascites is being gradually absorbed. The treatment must be persevered with and fluid removed on re-accumulation.

As regards the variety of parasite responsible for malarial cirrhosis of the liver one cannot be certain, as Captain Tucker, I.M.S., has said. I am inclined to believe that all three varieties are one and the same, and that the parasite of malaria is determined either by locality and seasonal changes or, which is most likely, the parasite during the mosquito phase of its existence assumes a difference in character and virulency wholly dependent upon the type and species of its host. I have not had a case of double infection but in one or two instances I have known patients to have subtertian parasites one year and benign tertian in the following year. Nevertheless, it is the subtertian parasite that prevails here and is possibly the responsible variety.

Mayaro, Trinidad, W.I.

AN UNUSUAL FRACTURE OF THE CLAVICLE.

BY J. W. ROB, M.A., M.D. CANTAB.,
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ON Oct. 22nd, 1907, the patient, who is a medical man, was playing Association football when he met with an accident which he describes as follows: "In tackling a man, running up behind him, I tripped over one of his feet and in recovering myself trod on the ball which rolled away and threw me heavily directly on to my shoulder. I rolled over on to my back. I felt the bone go but did not notice any pain in the arm or hand." He was carried off the field to a house and about half an hour later was seen by a medical man who ascertained that there was a comminuted fracture of the right clavicle. An attempt was made to reduce the deformity by laying the patient flat on his back but this was unsuccessful. Traction was then made on the arm but this caused such severe pain that it was decided that an anæsthetic would be necessary to enable the fracture to be properly set. The pain was at the seat of the fracture and also down the ulnar side of the forearm and hand, but the former was much the more severe. I saw him later and on examination I found that the right clavicle was fractured straight across in the middle. The inner fragment was about half an inch higher than the outer and slightly in front. Between these two fragments was a third fragment the upper end of which was square and about three-eighths of an inch across. This fragment projected upwards above the outer fragment about a quarter of an inch. It was freely moveable within limits. Its length could not be properly ascertained but it did not seem to be more than three-quarters of an inch long. The fracture was more than usually tender. Ether was given and traction was made upon the arm, which brought the fragments into very fair position. Sayre's strapping was therefore applied and this brought the outer fragment into line and level with the inner fragment, the third fragment intervening and projecting upwards about a quarter of an inch. A pad of cotton-wool was placed in the axilla and another pad was bandaged down over the fracture.

There had been a good deal of pain previously to the anæsthetic, principally at the seat of the fracture, but after recovering from the anæsthetic the patient was for some time fairly comfortable; however, about bedtime the pain returned and steadily got worse, so that during the night it was almost agony and was only relieved for about two hours by half a grain of morphine tartrate subcutaneously. The pain was not constant but paroxysmal, the paroxysms coming on about every hour. At first the pain was at the seat of the fracture, but it soon came to occupy an area corresponding to the distribution of the ulnar nerve. The patient thought that the strapping was pressing on the ulnar nerve at the elbow, so the inner side of the strapping was snipped through, but this gave no permanent relief. Next the two pads of cotton-wool, one in the axilla and the other over the clavicle, were removed and this gave relief for a time, but eventually the pain not only returned but became worse and also more extensive. The strapping was therefore completely removed and readjusted. This promised to be more successful, but the pain was as bad as ever on the night of Oct. 23rd. It was not now confined to the distribution of the ulnar nerve but included part of that of the median nerve. The conclusion from these facts was that there must be some pressure on the inner cord of the brachial plexus about the place where it divides into the ulnar nerve and the inner head of the median nerve. There was no obstruction to the venous return from the arm and the pulse in the right and left radial arteries was the same so far as could be ascertained by the finger.

On Oct. 24th a skiagraph was taken. Little could be made out with the screen, but a plate was exposed and developed at once, and this showed that the third fragment was at least one and a half inches long and was extending vertically downwards. It was obvious that the only way of dealing with this fragment was by operation, and on Oct. 25th Mr. P. W. G. Sargent made an incision along the upper border of the clavicle and removed the fragment. The fragment had the subclavius muscle and the costo-coracoid membrane attached to it. It tapered to a sharp point at its lower end. It was found to be the lower surface of the inner end of the outer half of the bone, which had been split off.

The operation relieved the pain and the fracture united very satisfactorily. A large amount of callus was formed, so that the loss of bone was more than replaced. There is no shortening, as might be expected from the fact that the whole of the upper surface of the clavicle was intact and the fragments did not overlap at all. The movements of the shoulder-joint are perfect, but rotation of the scapula on the clavicle is limited. The right arm cannot be extended and held up above the head.

Bearing in mind the fact that the fracture was due to indirect violence it is not easy to account for the position of the third fragment. Possibly what happened was the following. First the clavicle snapped across. Then the two fragments were driven against one another so that the inner end of the outer fragment was split and the lower part completely separated. Now the outer fragment was lower than the inner, so that if, whilst the inner end of the third fragment was in apposition with the outer end of the inner fragment, the force producing the fracture, i.e., a force applied at the outer end of the clavicle and directed inwards, be supposed to continue, then the inner end of the outer fragment would press against the upper surface of the third fragment and might force it into a vertical position.

This case presents more than one feature of interest. First, the bone was not broken at the junction of the outer and middle thirds, as is usually the case when the violence is indirect. Secondly, the fracture was not oblique, as is usually the case when the violence is indirect. Thirdly, injury to the brachial plexus or subclavian vessels is more often due to fractures of the clavicle by direct than by indirect violence.

Weybridge.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A NOTE ON A CASE OF RUPTURE OF THE SUPERIOR MESENTERIC ARTERY.

BY ANNIE F. THEOBALDS, M.B., CH.B. EDIN.,
PATHOLOGIST AND ASSISTANT MEDICAL OFFICER, WEST RIDING ASYLUM, WAKEFIELD.

THE case of ulceration into the superior mesenteric artery recorded by Dr. A. W. T. Whitworth in THE LANCET of July 18th, p. 157, recalls a similar case which we recently had in the West Riding Asylum. The patient was an epileptic imbecile, aged 34 years, who died suddenly after a seizure. He had been an inmate of this asylum for 12 years, and when admitted was suffering from a discharging psoas abscess, which healed, however, but later he developed phthisis. He also suffered from mitral disease, and this was supposed to be the cause of death. There had been no symptoms to point to abdominal disease. At the post-mortem examination on opening into the peritoneum there was seen to be a large amount of fluid blood and recent blood clot and in the left lumbar region a growth was seen apparently having arisen in the mesentery and this had infiltrated the surrounding tissues and caused some matting of the intestines. A branch of the superior mesenteric artery had evidently ruptured and there was considerable hæmorrhagic staining in its vicinity. Apart from these localised adhesions the peritoneum appeared to be quite healthy, the glands were not enlarged, and the bowel itself was free from ulceration. The psoas abscess had healed but there was advanced tuberculosis of the lungs with waxy disease of the liver, kidneys, and spleen. The mitral valve was found to be thickened and incompetent. On microscopical examination of the tumour it was seen to be a lipoma undergoing sarcomatous degeneration and infiltrated with blood.

I am indebted to Mr. W. Bevan-Lewis, medical director, for permission to publish this case, and to Dr. Agnes H. Nicoll, assistant medical officer, for the clinical notes.

Wakefield.

A NOTE ON THREE CASES OF SUPPURATING BURSA PATELLÆ DUE TO THE PNEUMOCOCCUS.

BY DAVID N. NABARRO, M.D. LOND., M.R.C.P. LOND.,
ASSISTANT PROFESSOR OF PATHOLOGY, UNIVERSITY COLLEGE HOSPITAL MEDICAL SCHOOL.

IT is a well-known fact that Fraenkel's pneumococcus may give rise to suppuration in almost any part of the body, and in his interesting Erasmus Wilson lecture [1] on the Pyogenetic Activities of the Pneumococcus, delivered before the Royal College of Surgeons of England on Feb. 12th last, Dr. J. W. H. Eyre gave a list of pathological conditions, other than pneumonia, induced by the pneumococcus. Suppurative bursitis does not appear in that list, and I am unable to find any record of a case of pneumococcal bursitis. The condition cannot be a common one, for Mr. S. G. Shattock and Dr. Eyre had not seen or heard of a case until quite recently. By a curious coincidence I have lately met with a case and heard of two others which by the courtesy of Mr. F. Deas of Merton, Surrey, Mr. L. S. Dudgeon, and Dr. Eyre, I am able to put on record in this communication.

Mr. Deas has kindly furnished me with the following clinical details of his case. The patient was a married woman, aged 32 years, who was first seen on April 22nd of this year, when she complained of pain and swelling in the right knee. On examination a swelling of the size of a turkey's egg was found over the right patella. The swelling was red, hot, tender, and fluctuating, and was evidently a suppurating bursa patellæ. It was opened on the following day and a large quantity of pus was evacuated. There was nothing distinctive about the pus, which Mr. Deas brought to me for investigation. Under appropriate treatment the healing of the abscess cavity was slow but uneventful. The patient gave no history of any previous illness until two years ago, when she was under treatment for "ulceration of the inside"—uterus and vagina. She emphatically stated that the swelling "came by itself." She had not injured the knee in any way within the previous eight or ten weeks and had done no kneeling.

Bacteriological examination.—The pus was yellowish-green in colour, thick and creamy, and of uniform consistence; it contained no flakes of lymph. Films stained by Gram's method and by methylene blue showed pure diplococci, which in appearance and arrangement closely resembled Fraenkel's pneumococcus. A little of the pus was inoculated subcutaneously into a mouse, which died in less than 36 hours from a pneumococcal septicæmia.

Mr. Dudgeon's case was that of a woman, aged 52 years, who ran a needle into the prepatellar bursa. Suppuration followed and the abscess was opened ten days later. A pure culture of the pneumococcus was obtained by Mr. Dudgeon.

Case 3 was also a suppurating patellar bursa from which Dr. Eyre isolated a pure pneumococcus. Dr. Eyre writes to me that he had never seen a case before.

It is a strange coincidence that these three cases of an apparently rare pathological condition should have occurred at about the same time and that the patellar bursa was the one to be affected in all three patients. In one case there is a definite history of injury, so that the pneumococcus probably gained a direct entry into the bursa along with the needle. In the first case recorded above the patient denied having injured the knee in any way and there is no history of antecedent pneumonia whereby the pneumococcus might conceivably have entered the blood stream and so have reached the bursa. The other alternative is that the pneumococcus was present on the surface of the body and entered through a small scratch or abrasion or through a hair follicle or other natural orifice (sebaceous or sweat gland).

In conclusion, I would thank Mr. Deas for giving me the opportunity of investigating his interesting case; Mr. Dudgeon and Dr. Eyre for allowing me to put their observations on record and for sending me notes of their cases; and Mr. Shattock for bringing to my notice the last two cases when I spoke to him about my own.

Hampstead, N.W.

[1] Reported in THE LANCET of Feb. 22nd, 1908, pp. 539-549.

Medical Societies.

SOCIETY OF TROPICAL MEDICINE AND HYGIENE.

Tropical Trichophytosis.

A MEETING of this society was held on July 17th, Sir PATRICK MANSON, the President, being in the chair.

Dr. ALDO CASTELLANI read a paper on Tropical Trichophytosis. In regard to tinea cruris (dhobie itch, tinea inguinalis), he said that the term "dhobie itch" was used very loosely in the tropics by the lay public to denote practically any pruriginous skin affection. The term, however, was specially used to denote a form of severe pruriginous affection which mostly affected the inner surface of the thighs, occasionally the axillæ, and in stout women the regions under the breasts. It was in that stricter meaning that the term was used by medical men practising in the tropics. The clinical features of the affection corresponded to Hebra's "eczema marginatum." In a well-marked case the perineum, scrotum, and the inner surface of the thighs presented large festooned patches with an abrupt elevated margin; the whole of each patch was bright red, or in a later period the margin only was red while the rest of the patch was of a fawnish colour, or even of normal colour. The pruritus

was unbearable. Owing to the scratching, secondary pyogenic infection or an eczematous-like dermatitis might develop. The complaint if not properly treated was extremely chronic; the condition got better during the cold season but recommenced during the hot months. Patients who suffered very severely from dhobie itch might, on going to the hills, get almost well in a few days without any treatment; in coming back to the plains the pruritus and all the other symptoms reappeared. The affection had been known to last for many years. It was to be noted that after a time the eruption might spread to other parts of the body, the abdomen, the trunk, legs, &c.; in such situations it might develop in rings or might form solid, elevated, dark red patches. In such situations the disease might be clinically indistinguishable from ordinary tinea circinata; it was to be noted, however, that the rings had generally a thicker edge and the patches were coarser and larger than in ordinary tinea circinata. It was to be noted also that in his experience mixed infections of dhobie itch and ordinary tinea circinata did occur presenting the two fungi growing on the same patient though on different regions of the body. For many years it had been known that dhobie itch was a trichophytic affection. In 1905, as the result of an investigation of numerous cases, he came to the conclusion that tinea cruris, or dhobie itch, should be separated from the ordinary forms of tinea corporis. In his experience there was more than one species of trichophytons which might give rise to dhobie itch; at least two species could be distinguished and there were probably several varieties of each—trichophyton cruris (Castellani, 1905) and trichophyton Perneti. Trichophyton cruris was the commonest species: in Ceylon about 98 per cent. of the cases were due to it. The fungus was abundant in recent cases; it was extremely scarce in cases of old standing. The fungus of trichophyton Perneti was microscopically indistinguishable from trichophyton cruris. Tinea cruris was known in the East as dhobie itch from the popular belief that it was contracted from linen which had been contaminated while being washed by the dhobie. As to how far that belief was correct he was not in a position to say. He had never succeeded in finding the fungus in clothes just received from the dhobie, either microscopically or by inoculating small portions of the linen itself in sugar media. He was, however, inclined to think that the popular belief might be to a certain extent correct, as a very few spores would be sufficient to set up the disease. He had been told by old sufferers from dhobie itch, who used to be frequently reinfected, that on their discontinuing to give their clothes to the dhobie and having them washed in the house instead the disease did not again affect them. In Colombo dhobies were in the habit of washing the clothes in the lake or in small pools of water that were more or less stagnant: it was certain that clothes belonging to infected persons were washed together with other clothes. Dhobie itch was very contagious: true epidemics occurred in schools and among soldiers in barracks. He had several times observed that husbands infected their wives. The diagnosis was easy in recent cases, the festooned appearance of the eruption limited by a sharp, elevated bright red edge being quite typical. In old cases, especially when secondary lesions due to scratching were present, the diagnosis might be very difficult, the affection being often mistaken for eczema. A case sent to him had been previously treated for eczema with Lassar's paste and calamin lotion for three months. In doubtful cases the microscopical examination would be of great help. It must, however, be noted that in old cases the fungus might be extremely scarce, the mycelium being practically absent and only a few spores being found. It was well to take the scrapings for microscopical examination from the edge of the eruption. In erythrasma the patches had a fawnish or dark reddish colour and presented often a fine pityriasic desquamation; the eruption was not limited by a raised red edge, and the fungus (microsporon minutissimum) was quite different from the fungi found in dhobie itch. Intertrigo was very common in the tropics, especially in corpulent persons. The lesions were very superficial, had not a festooned contour, and the margin was not sensibly elevated; no fungus was found. Primary eczema of the scrotum and the skin of the thighs in contact with it was as frequent in the tropics as it was in temperate zones. The eczema was generally of the moist variety; the moist surface, the absence of the festooned elevated margin, &c., easily distinguished it from tinea cruris. The affection if not energetically treated had a tendency to become very chronic and might last for years. Occasionally the eruption spread to the whole body, forming rings or solid patches; at other times a distressing dermatitis developed on old dhobie itch patches due to scratching. As already mentioned, tinea cruris might disappear during the cold season or when the patient went to the hills to reappear as soon as the hot season commenced. During the period of quiescence the skin of the affected regions often showed a brownish discolouration, furfuraceous, somewhat similar to erythrasma. In tropical practice the usual treatment was a chrysarobin or goa powder ointment. The result was generally fairly successful. The patient should be informed that the medicines stained the linen and gave also a dark stain to the skin and that occasionally unpleasant facts of absorption took place. His usual line of treatment in very mild cases was a resorcin salicylic ointment applied twice daily. In cases of medium gravity he used often a chrysarobin ointment. In more obstinate cases he used local applications of turpentine oil in the morning and at night a resorcin salicylic ointment; if the parts were much inflamed, at night simply a boric ointment or paste. That treatment gave good results. Turpentine was generally well borne, but patients often complained of a smarting and burning sensation a quarter or half an hour after the application. Exceptionally one met with patients who could not stand turpentine. In cases complicated with eczematous dermatitis and fissures one was apt to use a soothing treatment by pastes, lead lotions, &c., with the idea to heal first the eczematous lesions. In his experience, however, when the microscopical examination had shown the presence of the fungus it was best as a rule to start an energetic anti-trichophytic treatment at once. To the fissures which so often developed in the inguinal regions he applied a solution of nitrate of silver. He touched with that solution the fissures and all the moist parts; the application was somewhat painful but the pain soon disappeared and the fearful itching was relieved almost immediately. At night he applied a resorcin and salicylic ointment or paste all over the eruption; as soon as the parts had become less moist he started the turpentine or the resorcin-benzoin treatment. A precaution which must always be observed during the treatment, and after the treatment was over to prevent re-infection, was to dust all the undergarments with antiseptic powder. Tinea albigena had been first described by Nieuwenhuis in Java. The disease was fairly common in the Malay Archipelago and was occasionally met with in Ceylon. It generally affected the soles of the feet and the palms of the hands, but might extend to the forearms and legs; it might affect the nails. The eruption began with the appearance of small pruriginous spots on the palms and soles, the epidermis became raised and large vesicles developed containing at first clear serum; the bullæ burst and the skin remained dry and peeled off; the parts remained tender and there was desquamation and pruritus. A process of diffuse keratosis developed, the palms and soles becoming double their usual thickness; deep fissures might be formed at the natural folds. Several horny, semi-detached discs could often be seen at the dilated orifices of the sweat glands. The affection was very chronic; it might begin in youth or in adult life. After some time a process of apigmentation of the skin set in, white patches, leucoderma-like, developing and extending often to the legs and arms. As regards treatment, tincture of iodine and chrysarobin ointment (1 to 5 per cent.) answered fairly well. The fungus, trichophyton albiscicans (Nieuwenhuis, 1907) was a trichophyton of the megalosporon type. Sabouraud's tinea was first described by Sabouraud in patients returning from Indo-China, Japan, and Tonkin. He (Dr. Castellani) had seen a few cases in Ceylon. The eruption generally commenced on the uncovered parts of the body, ordinarily on the legs; the patients often stated that they thought the disease was due to prolonged immersion in stagnant water. The affection began with erythematous patches, the surface of which was covered with minute pityriasic squamæ. Reaching after a time the diameter of about one or one and a half inches, these patches became circinate. The circination, however, was incomplete, it was only segmentary. In dependent positions large polycyclic patches might be seen but only one-half or one-third circles, the rest being

badly defined. The base of the patches at that stage was of a very dark bistre-brown colour. The border showed polymorphic lesions, fine pityriasic squamæ, minute vesicles, and papules. The pruritus was very marked and excoriations due to scratching were constantly present. In chronic cases a thickening of the skin with lichenification took place, especially at the circinate borders. The disease was difficult of cure in the tropics, though it might disappear spontaneously on the patient proceeding to Europe. Chrysarobin ointment (1 to 4 per cent.) was the best treatment. The fungus, trichophyton Sabouraudi (Castellani, 1905) could not be grown on Sabouraud media or any other media which he had tried. Tinea imbricata (Manson) practically covered the whole body with round patches each of which presented several concentric scaly rings. The scales were flaky, resembling tissue-paper, dry, of a dirty greyish colour and slightly curled; if the scales were removed rings of concentric circular dark lines remained visible. The number of rings forming the patch varied. The eruption might spread to any part of the body except, in his experience, the scalp. Though several authors stated that the eruption never affected the face and axilla and rarely the palms and soles, he had often observed it in such situations. It was also stated that the nails were not affected, though Manson, who first completely described the disease, said that the nails being affected was of frequent occurrence. His experience tallied with that of Manson. The nails when affected were much thickened, had a rough surface and deep cracks; scrapings examined in liquor potassæ showed the fungus. The fungus did not invade the hair follicles. The general health was not affected but the patients complained of the disfigurement and of the pruritus; in the hot season the pruritus was much more marked. The disease was very chronic and very difficult to cure. The period of incubation varied between seven and ten days; after that time a slightly elevated brown patch was seen at the place of inoculation; the epidermis in the centre of the patch gave way and a ring of scaling epidermis was formed; that ring expanded excentrically and in the centre again a dark patch appeared which later broke and another ring was formed inside the first, and so on. The blood showed a certain degree of eosinophilia. The general health was not affected. The patient complained of the disfigurement which was very great and of the pruritus which in the hot season might be unbearable. The disease had no tendency to recover spontaneously; its treatment was difficult and cases apparently cured often showed a return of the eruption after a few months. It would appear that the best treatment for tinea imbricata was liniment iodi as suggested by Manson, or resorcin dissolved in tincture of benzoin as suggested by himself (Dr. Castellani). Tinea intersecta began with small oval, or roundish, very slightly elevated itching patches, generally situated on the arms, legs, chest, and back. The margins of these dark spots were at first slightly elevated and dotted often with minute dark papules. The patches were dark brown in colour, much darker than the surrounding skin, and presented a smooth tense surface at first; they increased in size slowly and some coalesced. After a certain time the surface of the patches was no longer tense; it became somewhat wrinkled, superficial cracks appeared so that white lines were visible intersecting the brown surface of the patches; later the cracks became deeper, the epidermis split, and several flaky curled up scales, whitish inside and dark on the outer surface, were seen; the scales were often removed by friction, &c., and whitish rounded patches only might remain. The eruption never developed in concentric rings like tinea imbricata; the patches remained isolated or fused together, forming irregular larger areas. Some patches might disappear spontaneously after a time. The general health of the patient did not seem to be affected. In some places there was a slight degree of eosinophilia. The eosinophilia, however, might have been due to the intestinal worms which most natives harboured. When the eruption was in the very first stage it might be mistaken for a form of tropical pityriasis versicolor. In pityriasis, however, the epidermis did not split; moreover, in tinea intersecta the fungus was not found on the surface, it grew between the superficial and deep layers of the epidermis. The affection began in a somewhat similar manner to tinea intersecta, dark brownish patches being present and the fungus in both eruptions growing between the superficial and deep layers of the epidermis. In contrast to tinea imbricata, however, the eruption of tinea intersecta never developed in concentric rings. The treatment was tincture of iodine and the usual antiseptic ointments answered well. He had recently come across two cases of tinea nigro-circinata which had not yet, to his knowledge, been described. As an addition he described a new dermatomycosis—tinea rosea—though it was not due to a trichophyton but to a fungus. The disease was fairly common among Europeans. The eruption generally first appeared on the chest, axillary regions, and back; it never involved the face. The eruption consisted of roundish or oval patches, not elevated or only very slightly so. Several of these patches were occasionally found coalescing together so that they might form larger patches of irregular outline. The colour was pinkish or reddish-pink, occasionally coppery, with a fawnish tinge; there were no scales, the surface was smooth and tense, rather shiny, or very finely wrinkled, and it did not show, as a rule, any desquamation. There was no pruritus, or if any it was very slight. The superficial lymphatic glands were not enlarged. The blood did not show—at least in the cases which he had examined—any abnormality. The general health was in no way impaired. The eruption was easily cured; a salicylic alcoholic lotion (2 to 4 per cent.) followed by a resorcin and salicylic ointment (10 per cent. resorcin and 2 per cent. salicylic acid) generally gave good results. Tincture of iodine also answered well.

After the paper had been discussed by Mr. G. PERNET, Dr. G. C. LOW, Mr. J. CANTLIE, Dr. W. CARNEGIE BROWN, Dr. F. M. SANDWITH, Dr. L. W. SAMBON, and the PRESIDENT, Dr. CASTELLANI replied.

Reviews and Notices of Books.

Rotunda Practical Midwifery. By E. HASTINGS TWEEDY, M.D., F.R.C.P. Irel., Master of the Rotunda Hospital; and G. T. WRENCH, M.D., late Assistant Master. London: Hodder and Stoughton; Oxford: Henry Frowde. 1908. Pp. 464. Price 16*s.* net.

THE Rotunda School of Midwifery has a deservedly high reputation and stands in the front rank of such institutions. No donht this is due to the fact that it has always considered the teaching of students as one of its chief functions and the presence of students inevitably brings out all that is best in the teaching capabilities of the staff of a hospital. The present work is of interest therefore inasmuch as it reflects at any rate one phase of the teaching of that school and may be supposed to present very fairly the traditions which have been handed down by successive generations of masters and teachers.

Dr. G. T. Wrench has compiled the work from the teaching of Dr. Hastings Tweedy. The book is essentially practical and concerns itself almost entirely with clinical midwifery. It is not to be expected that there will be uniformity of opinion as to various debateable points in the treatment of certain of the complications of midwifery even among successive teachers at the same school, and certainly not among the teachers of different schools, and it is not surprising therefore to find that in several instances we are not in agreement with the lines of treatment laid down by the authors. Some of the statements made are too absolute; thus, for example, we are told that it is useless to attempt to make a bimanual examination with the patient lying on the left side. It is, however, most important that the student should be trained to examine his patients both on the back and on the side and, as a matter of fact, there are several conditions in which it is better to examine on the side than on the back, as, for example, in the case of swellings occupying Douglas's pouch.

In a book written by one of the Dublin school of obstetricians we naturally turn with interest to the treatment

recommended for cases of accidental hæmorrhage. In the treatment of such cases when the hæmorrhage is concealed rupture of the membranes is advised, followed by plugging of the vagina or, as an alternative, vaginal Cæsarean section. No results are, however, given, and it is impossible, therefore, to form any opinion as to the success or otherwise of this mode of treatment. Under the heading of revealed accidental hæmorrhage we are told that the Rotunda method of plugging the vagina is more successful than any other method and 12 serious cases are quoted as treated in this way, of which two died. The student is recommended to remove the plug within six hours or sooner if it produces much shock, and if necessary the vagina is to be replugged. We doubt whether the Rotunda method of treatment will be found to give better results than any other in these desperate cases which usually die, no matter what is done.

The treatment advocated for cases of incarceration of the retroverted gravid uterus is certainly somewhat surprising. The student is told after two attempts at replacement have failed that he should induce abortion; in hospital, however, he is told that the correct treatment is to perform laparotomy to replace the displaced uterus and then to fix it in position by ventrofixation. To perform ventrofixation on the pregnant uterus seems to us both most injudicious and unnecessary. Indeed, we have yet to see the case in which laparotomy is necessary, and even if it were surely there is no necessity for the ventrofixation. In the section on replacement of the prolapsed cord nothing is said of the necessity which often arises to dilate the cervix and there is no mention of the correct treatment to adopt in cases where the face presents.

Two further methods of treatment which we find it quite impossible to endorse are the recommendation in considering complete rupture of the uterus to pull the child back through the tear into the uterus so as to endeavour to deliver it through the vagina and the advice to use an intra-uterine injection of glycerine for the induction of premature labour. There are, however, many sections worthy of praise in this work and the chapter on the treatment of cases of septic infection is very good, as is also that on the examination of the baby when not thriving.

The book, unfortunately, is written in a very slipshod style of composition and such expressions as "heavy whites," a "woman douches herself with a nozzle and douche-can," "most usually the uterus slips past the sacral promontory and follows the line of an ordinary pregnancy," and "reproduction is the test of a woman" are not to be commended. The volume is well printed but badly bound.

Forensic Medicine and Toxicology. By J. DIXON MANN, M.D. St. And., F.R.C.P. Lond., Professor of Forensic Medicine and Toxicology in the University of Manchester; Physician to the Salford Royal Hospital. Fourth edition, revised and enlarged. London: Charles Griffin and Company. 1908. Pp. 709. Price 21*s.*

THIS text-book is too well known to require any indications from us as to its nature and scope. The fact that a fourth edition has been called for is sufficient proof that the efforts of the author have met with the success which they deserve. The present edition has been thoroughly revised and recent cases illustrative of various branches of forensic medicine have been added. The section on toxicology is now very complete and includes all poisons of practical import.

The remarks on poisonous foods are particularly worthy of attention. The author points out that there are three ways in which meat may become dangerous as food: (*a*) from the presence of disease at the time of the slaughter in the animal from which the meat is derived; (*b*) from micro-organisms which attack it, or develop in it, subsequently to slaughter; and (*c*) from the toxalbumoses or the ptomaines. It is the presence of toxins which gives rise to so many difficulties in the elucidation of cases of meat-poisoning, but knowledge on the subject is accumulating and becoming more accurate. Most of the toxins which are developed in poisonous meat are toxalbumoses—that is, proteins which have been altered by the action of bacteria—and which have thereby acquired intensely poisonous properties; it is possible that enzymes may be associated with some of these albumoses.

Dr. Mann draws attention to the interesting fact that it is by no means necessary that meat should be obviously putrefying in order to be dangerous as food; meat that appears quite fresh may be poisonous. Occasionally the flesh of a diseased animal may be eaten with impunity when quite fresh; but if kept for a day or two it may develop poisonous properties. In Germany sausage-poisoning—to which the terms botulism and allantiasis are applied—is not uncommon; the liver and blood which enter into the composition of some of these sausages render them specially liable to develop toxins. These various points are important to remember in the investigation of cases of alleged poisoning due to diseased meat.

Poisoning by substances which are used in manufactories is, of course, of the utmost importance to persons who are employed in those places. Apart from the well-known poisons phosphorus, arsenic, and the like, less acknowledged poisons also give rise to serious symptoms. Some of the nitro-derivatives of benzene are of this nature and are fully considered in Dr. Mann's work. Poisoning by dinitrobenzene and roburite may cause a definite series of symptoms. It is customary in many works where the first-named substance is used to provide the men with rubber gloves, as otherwise their hands become contaminated with the poison which is thus transferred to food.

We once more cordially commend this work to our readers. It is written in a manner that commands attention and the numerous illustrative cases which are given materially add to the interest of the volume. The book will be found valuable for students preparing for the higher examinations and also for purposes of reference it will prove a trustworthy guide.

The Law of Hospitals, Infirmaries, Dispensaries, and Other Kindred Institutions, whether Voluntary or Rate-supported. By ARTHUR TURNOUR MURRAY, of Lincoln's Inn, Barrister-at-law, B.A. Univ. Coll. Oxon. London: John Murray. 1908. Pp. 287. Price 10*s.* 6*d.* net.

As the law assumes acquaintance with its provisions on the part of those who are subject to it and declines to accept ignorance as a plea in defence of any transgression, however unintentional, a compendious and practical handbook dealing with the law so far as it relates to hospitals should be welcomed by all engaged in the conduct of such institutions. These are laymen who, in transacting their ordinary and daily duties, which they may have assumed voluntarily, are constantly confronted with legal questions, possibly not complex but essentially technical, and Mr. Turnour Murray is no doubt aware that a layman, even though he may have access to a law library, has not the training which enables the barrister in practice to pursue his investigations through a maze of statutes and law reports, and to enjoy the fascination of doing so no less when the point to be elucidated is obscure and when digests and text-books fail to assist him in his quest. It may also have struck him that in the conduct of charitable institutions constant recourse to lawyers for advice is not consistent with the practice of that rigid economy whereby alone charity can compass its full measure of effectiveness. Be this as it may, the author of the work under review has set himself the task of extracting and of reducing into the limits of

a single volume the law affecting hospitals and kindred institutions, whether voluntary or not, the result being a book which secretaries of hospitals and members of their medical staffs and managing committees, as well as lawyers whose advice these may still be obliged to seek, should find of considerable utility. In form it is arranged in 33 chapters, to each of which a main subject is assigned, the alphabetical order of the subjects deciding the relative positions of the chapters. Thus the first and second deal respectively with Accounts and Ambulances, and the closing ones are devoted the last to Voluntary Hospitals and the penultimate one to Vivisection. Each chapter, again, is subdivided into paragraphs with headings in large type, which indicate the particular matter under immediate discussion; and, with the assistance of these headings and of a copious index, even he who is neither a barrister nor a solicitor should have little trouble in getting "on the track" of whatever information he may require. If he does not then consider that he is fully enough instructed upon the point at issue, and in a work of this kind the exposition of the law is necessarily in the nature of a brief summary only, he will nevertheless have formed an opinion as to where the main difficulty lies, and as to the features of the particular puzzle with regard to which professional advice may be required.

Instances of useful chapters in which the general law has been summarised so far as it is applicable to hospitals will be found under the titles "Gifts to Hospitals," "Incorporation," and "Land." The law relating to the last-named subject naturally affects the donor who may contemplate giving land or money for its purchase to a hospital, and also the hospital which may desire to receive a gift of land, or to let, mortgage, sell, or otherwise deal with real property already belonging to it. The holding of land *in mortuâ manu* has been a matter with which the law has occupied itself during centuries in which hospitals for the sick were not in existence as recognised and worthy objects of benevolence, and such a work as that of Mr. Murray naturally does not do more than summarise the provisions of the Mortmain Acts so far as they affect his subject. There will, however, be found in his pages enough to give an idea of the points to be considered in handling this class of property, although the actual transaction of business relating to it will be intrusted to a solicitor. Among other topics relevant to hospital management and not perhaps easy to grasp by a perusal of works having a wider legal scope may be mentioned that included in the chapter headed "Meetings." The references to cases decided upon disputes arising out of meetings of bodies of persons interested in a common object will show how easily technical and formal points not properly considered and provided for may cause trouble and itigation where the smooth working of the machinery should be a matter of routine.

Turning to the consideration of a burning question of the day affecting the medical profession and the hospitals we are a little disappointed to find that the author has not been able to speak with any assurance as to the cases of death in a hospital which should properly form the subject of an inquest. His index readily guides us to the paragraph which touches upon but does not dispose of this matter, and we read that "the hospital authority should at once give notice to the coroner in every case where it is likely that an inquest will be required. Death from heart failure while under an anæsthetic would be such a case, even though the cause of death is well known. Another case would be where a person is brought in dead to a hospital and no certificate of death can be obtained. The practice of coroners is, it is believed, not quite uniform." The last sentence quoted may contain a reference to the practice inaugurated by Mr. Troutbeck in one London district, but possibly the discussion with regard to it was of too recent development to have attracted the author's serious notice and the new departure too entirely novel and without precedent for any light to be thrown upon it by past cases.

With regard to deaths in hospitals we note a useful paragraph pointing out the somewhat indecisive attitude of the law as to the right to make a post-mortem examination of the body of a person who has died in a hospital and as to the need for caution and for obtaining the consent of relatives thereto. This is illustrated by the quotation of a passage from an evening newspaper, the accuracy of which the author expressly says is not vouched for. Perhaps in the circumstances it had better have been omitted. Such sensational accounts of alleged unjustifiable acts performed in hospitals find ready acceptance in the press, and the true explanations given or readily obtainable are seldom accorded the same prominence. Still, it illustrates and confirms to some extent the author's warning that no body should be dissected in a hospital until every reasonable effort has been made to communicate with the persons entitled to object.

Electrical Treatment. By WILFRED HARRIS, M.D. Cantab., F.R.C.P. Lond., Physician to the Department for Nervous Diseases and Lecturer on Neurology, St. Mary's Hospital, &c. London: Cassell and Co., Limited. 1908. Pp. 383. Price 7*s.* 6*d.*

THIS is a very practical and useful book on Electrical Treatment. The author rightly assumes the possession of an elementary knowledge of electricity, so that the work is not encumbered with material which ought to be learnt at the commencement of medical study. By this arrangement the author has been able to approach his subject at once, and on examining the work we find that he has adopted a very admirable arrangement, so that when any particular current is described the methods of employing it as well as its field of usefulness are dealt with at the same time.

After a short but sufficient introductory chapter on apparatus, two chapters are devoted to the faradic current and its uses in treatment. Then follows a series of chapters on the galvanic current and treatment by galvanism. The importance of this form of electricity as a therapeutic agent is indicated by the fact that no less than five chapters, running to nearly 150 pages, are assigned to it. Separate chapters on electric baths, sinusoidal currents, and so on, come next in order, and in all of these the subject is treated very fully and completely. The two final chapters deal with electric light baths and x rays and static and high-frequency currents respectively.

The book is a very good one and its readable style will go far to insure its success. It should be in the hands of everyone engaged in electrical treatment.

Clinical Methods: A Guide to the Practical Study of Medicine. By ROBERT HUTCHISON, M.D. Edin., F.R.C.P. Lond., Physician to the London Hospital and Assistant Physician to the Hospital for Sick Children, Great Ormond-street; and HARRY RAINY, M.D. Edin., F.R.C.P. Edin., F.R.S. Edin., Assistant Physician to the Royal Infirmary, Edinburgh. Fourth edition, thoroughly revised. London, Paris, New York, Toronto, and Melbourne: Cassell and Co., Limited. 1908. Pp. 632, small 8vo. Price 10*s.* 6*d.* net.

THE rapid advance of bacteriology and chemical pathology has led to a corresponding growth of clinical medicine which is now treated of separately in books of considerable size. Although "Clinical Methods" does not deal with diagnosis, prognosis, and treatment it

provides a complete description of those methods of clinical investigation by the application of which a correct medical diagnosis can alone be arrived at. As a text-book for the student in the medical wards of a hospital the work under review is certainly one of the best, if not the best, of its kind. Its rapid sale is a record of its usefulness. The present edition has been kept well abreast of the latest scientific advancements and it has been carefully revised by the authors, so that the latest clinical methods and developments are brought to the student's notice. Several alterations and additions have been made to the chapters on clinical bacteriology, the nervous system, the urine, the blood, and the alimentary system, and several new plates and diagrams have been added so as to represent in accurate form the results of the latest discoveries in the various fields of clinical observation. Calmette's ophthalmic tuberculin reaction is described at length in this edition but no reference is made to Dr. Joulie's methods of urinary analysis. Perhaps this is just as well, since observers are by no means agreed as to the precise value of his methods. Cryoscopy—the determination of the molecular concentration of the urine, and therefore the renal activity, by observing the depression of the freezing point of the urine below that of distilled water—occupies more than three pages of small type.

Perhaps the chief merit of this work lies in the terse and lucid descriptions of bedside methods of examination, and in this regard the short chapter devoted to the clinical examination of children deserves special mention. Nothing could be better.

JOURNALS AND MAGAZINES.

The Edinburgh Medical Journal.—The novel cover in which the July number of this journal appears at once indicates that some change has occurred in its arrangements, and we find that it has now incorporated with it the *Scottish Medical and Surgical Journal.* In this first number of the new series is published Dr. T. S. Clouston's Harveian oration entitled "Blood and Mind," in which attention is called to the dependence of nerve-cells upon their surrounding medium by which their normal activity is conditioned. Dr. A. Logan Turner and Dr. J. S. Fraser give an analysis of the work done in the ear and throat department of the Edinburgh Royal Infirmary during the year 1907, and Dr. Francis D. Boyd discusses the diagnostic limitations of the discovery of free hydrochloric acid in the contents of the stomach. Dr. William Russell replies to some criticisms made by Dr. G. A. Gibson upon his recent work on arterial hypertonus.

The Bristol Medico-Chirurgical Journal.—A valuable paper which appears in the June number of this magazine is that by Dr. J. M. Fortescue-Brickdale on Calmette's Ophthalmic Reaction in Tuberculosis. From the available reports of cases he finds that of 1623 clinically tuberculous patients 1419, or 87·4 per cent., gave a positive reaction; of 1931 clinically non-tuberculous cases 214, or 11·1 per cent., were positive. Instances of severe inflammation of the eye following Calmette's procedure may occur but are exceedingly rare. Dr. Newman Neild writes on hæmoptysis in pulmonary tuberculosis and advises that on the appearance of any danger of suffocation the patient should be placed on his face with the head and shoulders somewhat dependent to facilitate escape of the blood; and Mr. J. M. H. Munro writes in favour of the use of tuberculin in pulmonary tuberculosis, controlled by estimation of the opsonic index.

The Glasgow Medical Journal.—In the July issue of this journal Dr. T. K. Monro and Dr. Leonard Findlay record a case of tuberculosis of the spinal cord and medulla in which a localised lesion occurred in the olivary body. The resulting degeneration seemed to show that the majority of the fibres of the cerebello-olivary bundle are descending and only a few ascending in type. Dr. W. K. Hunter gives notes of a case of hypertrophic stenosis of the pylorus in an infant eight weeks old, and discusses the treatment of this condition. An unusual form of mediastinal tumour, apparently a mixed carcinoma and sarcoma, is described by Dr. William MacLennan, and Dr. A. MacLennan and Dr. J. Shaw Dunn record an instance of a papillomatous cyst of an accessory thyroid.

The Journal of Comparative Pathology and Therapeutics.—The June number of this journal contains a number of interesting papers. Dr. A. Theiler continues an account of his experiments on protective inoculation against equine piroplasmosis. He obtains his immunisation by passing blood originating from a natural infection of the donkey with piroplasma equi through donkey foals. After the fourth passage he takes one cubic centimetre of the blood of the foal and injects with certain precautions, and, so far, has obtained a very satisfactory result so long as all the foals are kept free from ticks which by re-infection might increase the virulence of the blood which has to be used as vaccine. A couple of cases of spurious hermaphroditism in the sheep are recorded by David Waterston, M.D. Edin., and Alexander Goodall, M.D. Edin. Notes on two new methods of testing with tuberculin, the endermic method and the ophthalmic, are given by A. M. Trotter, M.R.C.V.S., from which it may be gathered that the ophthalmic method is not so trustworthy a diagnostic method as when tuberculin is injected subcutaneously but that the endermic and ophthalmic methods may be used simultaneously on the same animal. Captain F. S. H. Baldrey, Indian Army Veterinary Service, F.R.C.V.S., records some experiments on preventive vaccination against strangles. He claims that he can obtain very considerable insusceptibility to strangles by vaccinating with a broth culture of the strangles streptococcus killed under toluol or with an agar culture suspended in salt solution and killed at a temperature of 58° C. He suggests the use of a considerable number of different organisms for the preparation of this vaccine. Another paper on strangles is contributed by Lieutenant E. Clive Webb, A.V.C., who maintains that even a passive immunity would be useful in the case of young horses. Sir John McFadyean continues his article on Ultra-visible Viruses. He deals in turn with fowl plague, yellow fever, cattle plague, sheep-pox, epithelioma contagiosum of birds, and swine fever or hog cholera. He gives an admirable *résumé* of what has been published on these diseases. A series of reviews and clinical notes and abstracts complete an interesting number.

Journal of Pathology and Bacteriology.—The present part (No. 4) completes the twelfth volume of this journal and the first volume since it became the official journal of the Pathological Society of Great Britain and Ireland. It contains a continuation of the proceedings of the meeting of the society held at the Lister Institute on Jan. 3rd and 4th last. It also has a series of interesting papers, three dealing with cerebro-spinal meningitis—the first of these by Stuart McDonald on Observations on Epidemic Cerebro-spinal Meningitis; the second by Theodore Shennan and W. T. Ritchie on a Bacteriological Investigation of Epidemic Cerebro-Spinal Meningitis; and a third by Ivy Mackenzie and W. B. M. Martin on Serum-Therapy in Cerebro-Spinal Fever. These papers form a well-illustrated group of considerable interest to those who are studying this subject. The suggestions as to serum-therapy appear to be specially valuable. John H. Teacher, in a paper on the Development and Natural Healing of Secondary Tumours of Chorion-epithelioma Malignum, draws attention to a very interesting group of tumours in

which, although there is healing as regards the growth, the clinical termination is still unsatisfactory. A. E. Boycott and G. C. C. Damant record Some Lesions of the Spinal Cord produced by Experimental Caisson Disease; they discuss the manner of the production of "bends" and show how the rate of escape of gas bubbles from the blood in certain tissues may account for the conditions presented. J. P. McGowan, from a series of "*In Vivo* Experiments with Complement," concludes that the intravenous injection of "unsensitised, sensitised, or saturated ox-blood corpuscles into fresh rabbits produces no diminution of complement, whereas the injection intravenously of unsensitised or sensitised ox-blood corpuscles into immune rabbits (v. ox-blood corpuscles) produces a marked diminution in complement." W. Geoffrey Harvey describes some of the Pathological Effects of Roentgen Rays on Animal Tissues, and A. C. Hudson gives an account of Some Cases of Thyroid Carcinoma, in which he points out that this disease is not so rare as is generally supposed, and that it is more amenable to surgical treatment than is usually realised. John A. G. Macewen describes an Unusual Type of Breast Tumour, which he is inclined to look upon as being the result of the action of a parasite. A full index of subjects and authors, a table of contents, and a card index complete a very useful number.

The Medical Chronicle.—The concluding part of the paper on the Value of Opsonic Methods in Diagnosis and Treatment by Dr. G. E. Loveday and Dr. Albert Ramsbottom appears in the July number of this journal. Cases of tuberculous disease of the genito-urinary system, and of the skin, glands, and joints are recorded, as well as instances of staphylococcic infection; and an account is given of a certain number of cases in which estimation of the opsonic index was used for diagnostic purposes. The authors conclude that treatment by opsonic methods is highly satisfactory in tuberculous adenitis, and that considerable improvement may occur in tuberculous cystitis, though progress here is usually slow. Tuberculous bones and joints also undergo improvement.

New Inventions.

A NEW CUPPING INSTRUMENT FOR THE CERVIX UTERI.

THE operation of cupping the cervix uteri is not one which is often called for, although in some cases of chronic con-

gestion of that organ it is of some value. The artificial leech, of which an illustration is appended, presents some novelties in that it can be boiled, and is further provided with a slot so that the degree of suction can be regulated. It should prove useful in the comparatively rare cases in which such a form of treatment is desirable. The instrument is manufactured by Messrs. C. J. Hewlett and Son, 35 to 42, Charlotte-street, London, E.C. A. DUKE.

CENTRAL MIDWIVES BOARD.

A MEETING of the Central Midwives Board was held at Caxton House, Westminster, on July 23rd, Dr. F. H. CHAMPNEYS being in the chair.

A letter was received from the secretary of the Manchester branch of the National Union of Women Workers inclosing a copy of a resolution passed by the branch urging the Board to memorialise the Local Government Board with the object of obtaining Government recognition and subsidy of midwives. It was decided to refer the letter to the standing committee.

A letter was considered inquiring as to the interpretation of the words "personally delivering" in Rule C.1 (1). The Board decided to send the following reply:—

No case can be counted in which the pupil has not made abdominal and vaginal examinations (that is more than one) and has also personally delivered the head and body of the child and the placenta and membranes. This excludes all cases known as "B.B.A." (born before arrival), and also all cases in which the labour is too far advanced on arrival to make (repeated) abdominal and vaginal examinations possible. It also forbids the same case being counted to more than one person. The fact that medical help becomes necessary to apply forceps or otherwise assist delivery does not prevent the case being counted to the pupil.

The question as to how the information contained in this reply should be circulated was referred to the standing committee.

A letter was considered from the medical officer of health of Manchester, inclosing a resolution of the local supervising authority suggesting the amendment of the Midwives Act so as to bring monthly nurses within the scope of the Act. The Board decided as follows:—

That it is inexpedient to extend the provisions of the Midwives Act to nurses who act under the direction of a medical practitioner responsible for the case.

A letter was received from the clerk of the Council, transmitting a copy of a correspondence in regard to the payment by the guardians of the West Derby Union of medical men called in on the advice of a midwife.

A letter was considered from a pupil midwife complaining of the methods of training adopted in a cottage hospital the medical officer of which is a recognised teacher, and the matron of which is approved for the purpose of signing Forms III. and IV. The Board decided to ask the medical officer of the cottage hospital to furnish his explanation of the matters complained about.

A letter was considered from the secretary of the Association for Promoting the Training and Supply of Midwives as to the distribution of the leaflet on cancer of the womb. The Board decided to supply the leaflet as follows: at the price of 1*s.* per 100, post free.

The following motions proposed by Mr. J. W. FORDHAM and seconded by Dr. CHAMPNEYS were carried:—

That it is desirable that Section 5 of the Midwives Act, 1902, be amended so as to provide for the apportionment of the balance of the annual expenditure of the Board, not met by fees and other receipts, on the areas of the several local supervising authorities on the basis of the population at the last census for the time being.

That the draft Bill for the amendment of Section 5 of the Midwives Act, 1902, prepared by Mr. Fordham be approved, and that the Privy Council be asked to arrange for the introduction of the Bill in the present session of Parliament

ROYAL LONDON OPHTHALMIC HOSPITAL.—Courses of instruction will be given at this hospital during October and November as follows. On Tuesdays and Fridays, from Oct. 6th to 16th inclusive, at 10 A.M., Mr. C. D. Marshall will give demonstrations on the Examination of the Eye; on Tuesdays and Thursdays, from Oct. 13th to Nov. 26th, at 7.30 P.M., there will be a series of lectures and demonstrations on the Use of the Ophthalmoscope by various members of the staff; and on Mondays, from Oct. 12th to Nov. 9th, also at 7.30 P.M., Mr. Marshall will deal with Errors of Refraction. The fee for each of these courses is £1 1*s.* On Fridays, Oct. 9th to 30th, on Nov. 6th, and on Thursdays, Nov. 12th to 26th, at 1 P.M., various members of the staff will lecture on External Diseases of the Eye. The fee for the series is £2 2*s.* On Wednesdays, Oct. 7th, 14th, and 21st, at 8 P.M., Mr. E. Treacher Collins will give lectures with lantern slide demonstrations on the Surgical Anatomy of the Eye; on Thursdays and Mondays, from Oct. 22nd to Nov. 5th, at 1 P.M., Mr. Claud Worth will lecture on Motor Anomalies; and on Fridays and Wednesdays, from Oct. 16th to Nov. 11th, at 8 P.M., Mr. J. Herbert Parsons will lecture on the Pathology of the Eye, the fee for each course being £1 1*s.* Courses in Practical Pathology and Bacteriology are also announced, as is also a course of Practical Operative Surgery, under the direction of Mr. Arnold Lawson on Wednesdays at 4 P.M., and under Mr. Parsons on Saturdays at 2 P.M. The fee for this latter course is £3 3*s.* Clinical lectures open to all qualified practitioners are given at 1 P.M. on various dates during October and November. Full particulars can be obtained from the secretary at the hospital.

THE LANCET.

LONDON: SATURDAY, AUGUST 1, 1908.

The British Medical Association: The Presidential Address.

THE Presidential Address delivered by Mr. SIMEON SNELL at the seventy-sixth annual meeting of the British Medical Association may be regarded as an endeavour to deal with the history and development of the Association itself, both local and general, and with the part taken by Sheffield in the promotion of medical science and medical education, while the personal note expected of the speaker on these occasions is supplied by an interesting and valuable description of the researches of the author in connexion with miner's nystagmus. The general result has necessarily been a discourse of a somewhat fragmentary character, in which some of the subjects referred to were not followed sufficiently far to realise any conception of completeness and from which topics of great interest, which might fitly have received full consideration on such an occasion, such topics as the general position of the Association in the State and the objects which should chiefly be aimed at by its officials, are somewhat left out of calculation.

An important part of the address was occupied by an account of the gradual growth and development of the Sheffield School of Medicine, which ultimately became the nucleus of the now flourishing University, and the history, as related by the President, contrasts favourably with that of analogous institutions in the metropolis. The medical schools of London have owed their separate existences to rivalries, carried beyond the point at which they were calculated to be beneficial, while the success attained at Sheffield has been due to disinterested combination and to the determination of the teachers to render all considerations of personal profit or personal renown subordinate to the success of the common endeavour. "Through good fortune or ill fortune the work of medical education was carried on," and although at no time were the services of the lecturers pecuniarily recompensed, such an *esprit de corps* was established that no medical practitioner has occupied a prominent position who at one time or another in his career has not rendered more or less service to the medical school. We have no doubt that an analogous history could be given by other provincial schools which, like that of Sheffield, have furnished the nuclei of universities, and, generally speaking, in provincial towns or cities possessing more than a single hospital the practice of all would be thrown open to the students of the common school. The metropolitan conditions which led to the suggestion of dealing with "preliminary" subjects at the University of London have been in existence for many years, and the imperfections of the individual schools have during all that time been regretfully admitted even by those who were most concerned in administering them. If a degree of public spirit analogous to that displayed at Sheffield had been displayed also in London, it would have led to combinations many years ago and to an efficiency in the teaching of the preliminary subjects which it would now be somewhat sanguine to expect. The project of conducting this teaching only at the new University of London was perhaps open to the objection that the extent of the metropolis is too great for its wants to be supplied from any single centre; but it would surely have been possible, if the authorities of existing schools had been able to read the signs of the times, and to subordinate rivalries to considerations of the common good, to form combinations by which a sufficient number of suitably placed centres would have been provided, and by which individual teachers of high attainments would have been provided with classes sufficiently large to afford them adequate remuneration, and, at the same time, to stimulate them to a degree and kind of exertion which the presence of ten or a dozen students is hardly calculated to call forth. The secondary schools are not, we think, well calculated to supply the want which is everywhere beginning to be felt. "The sports of childhood satisfy the child"; but the teaching of boys' class-rooms can hardly be accepted as an adequate preparation for the study of a profoundly difficult calling.

The pioneer work done at Sheffield in the direction of investigating industrial diseases furnished the President with a topic of very great interest, in dealing with which he was not only thoroughly at home but was able to describe work of his own which has not been inferior in importance to anything accomplished on analogous lines by his predecessors. The labours of Sir ARNOLD KNIGHT and of Dr. CALVERT HOLLAND in relation to the diseases produced by the inhalation of dust in grinding, and those of Dr. J. C. HALL in relation to lead poisoning during file-cutting were both of far more than local importance and have not only given to the authors in question permanent places in the history of medicine but have also had the more important effect of leading to the amelioration, or in some cases to the removal, of the harmful conditions which were described. The researches of the President himself into the causes and consequences of miners' nystagmus will be found fully set forth in the address, and they will be seen to possess a very real and practical importance, somewhat analogous, in the case of miners, to the importance of defective colour sense in railway employees, sailors, watchmen, and signalmen. Mr SNELL has shown that the oscillation of the eyeballs and the apparent unsteadiness of the object of vision which it produces are calculated to obscure the appearances of the flame of a safety lamp which afford the first warning of the presence of a dangerous amount of fire-damp in the air of a mine, and he suggests that explosions may have been caused by the innocent incapacity of mine "deputies" to see the conditions from which, if they could have seen them, they would have received timely warning. The nystagmus itself appears, unfortunately, to be a consequence of positions of the body which are necessary to the continuance of a miner's

work, and if this be so the circumstances clearly point to the expediency of a medical examination of the "deputies" from time to time. Such an examination would, perhaps, be as vigorously resented by the men as has been the testing of the colour vision of railway officials and workmen. Fortunately, the industry of coal-mining is so dangerous as already to have been placed to a considerable extent under legislative control, and there can be little doubt, in view of the facts set forth in the Presidential Address at the British Medical Association, that this control should be still farther extended. Explosions are the most appalling of mine accidents, and every condition calculated to strengthen our present defences against them is eminently worthy of the attention of the legislature.

The British Medical Association: The Address in Medicine.

THE philosophy of HERACLITUS as summed up in the well-known generalisation *πάντα ῥεῖ*, "all things are in a state of flux," can be applied at almost any season with singular appropriateness to medicine as a science. The orthodox in medicine, both as regards theory and practice, is ever changing—since the discoveries revealed by research and confirmed by experience, when incorporated into the general scheme, necessitate the modification of views previously held, the adoption of new methods, and the relinquishing of old ones. By such means only can medicine advance as a science and achieve a truly rational basis. The constant change is not to be regarded as a reproach but rather as an evidence of activity. The tide of advance may at times be slow and may suffer set-back in some directions occasionally, but all that is necessary is a careful and judicious attitude towards new discoveries. In the thoughtful Address in Medicine delivered by Dr. J. KINGSTON FOWLER at the seventy-sixth annual meeting of the British Medical Association at Sheffield on the subject of Modern Medicine, there is afforded an interesting examination on these lines of some of the recent changes which are in process of evolving, notably in regard to the subjects of vaccine-therapy and of certain special forms of treatment for pulmonary tuberculosis, and also in regard to the vexed questions of medical education and the status of the medical practitioner, on all of which he has some claim to speak with authority. Nothing is more clear in Dr. FOWLER'S address than that we are living in times of great change in many directions.

Dr. FOWLER commences his address by referring to the great interest which is being excited by the recent developments in the treatment of bacterial infections by the inoculation of vaccines and by paying a tribute to the work of Sir ALMROTH WRIGHT and his collaborators to whom this advance is so largely due. He discusses the process of immunisation and the discovery of the opsonins and their use as a practical means of measuring the amount of protective substances evolved under varying conditions. He deprecates the narrowness of view which sometimes tends to embitter the controversy of those engaged in the appraisement of new methods, and rightly points out the importance of strict examination on truly broad and critical lines, a view which we heartily endorse, for nothing tends to discredit the scientific worker more than polemical discussion or personal rancour, and all results should be recorded dispassionately. He likewise condemns the intemperate haste shown by some people in the too ready acceptance of the claims of new methods. In regard to the results of vaccine-therapy, Dr. FOWLER expresses the view that these have been very favourable, and that there can be little room for doubt that the introduction of this form of therapy marks a great advance in the treatment of the infectious diseases, a view with which few will be found to disagree. It is with especial reference to the employment of this method in the treatment of pulmonary tuberculosis that a most careful study on critical lines is offered by Dr. FOWLER. He begins by pointing out the detrimental effects obtained when tuberculin was originally introduced and the better results that have been obtained since tuberculous vaccines have been given in the minute doses which are now recommended, and since their administration has been controlled by determinations of the opsonic index. He next gives an interesting account of the theory of auto-inoculation, which assumes that a patient with a focus of infection may inoculate himself at intervals with varying doses of the virus or toxins of the organism of his disease and that the fluctuations in the temperature and in the opsonic index may be the result of such auto-inoculations. The valuable observations of Dr. M. S. PATERSON on graduated labour in the treatment of pulmonary tuberculosis are referred to at some length and the view is confirmed by the observations of Dr. A. C. INMAN on the opsonic index of the patients thus treated, that one of the benefits derived from it consists in graduated auto-inoculation. Dr. FOWLER in speaking of the sanatorium treatment of the disease, a form of treatment which he himself was very active in introducing to this country, regards it as having been of great value not only to the actual patients but also in leading to general improvement in the health and habits of the people. He further expresses the view that sanatorium treatment and vaccine-therapy will prove of mutual assistance in the warfare against tuberculosis, and also that the sanatorium principle will be applied to the treatment of a variety of affections other than tuberculosis. The multiplicity of homes and retreats already existent confirms this surmise.

Dr. FOWLER'S observations on medical education will be read with especial interest from the active part which he has played in educational matters as Dean of the Faculty of Medicine at the University of London. In the light of recent events it is perhaps not to be wondered at that he speaks in an almost pessimistic strain of the immediate prospects in London, referring half enviously to "the priceless spirit of local patriotism" of Sheffield. He congratulates the city of Sheffield on the establishment of its University and regards the recent increase in the number of universities in this country as an unmixed good. In this connexion he quotes with hearty endorsement some observations of Sir EDWARD SIEVEKING who maintained that all members of learned professions ought to enjoy a university training. We are in cordial agreement with these views. Medicine is daily drawing more and more from various specialised branches of applied science—e.g., bacteriology, bio-chemistry, and

certain physical sciences, such as electricity and radiology, and there can be no doubt that in the future these specialised applied sciences will increase. A university—a real teaching university with the widest possible range of subjects—is the right authority to bring these diverse subjects to the instruction of the student and to correlate them properly in the medical curriculum. As Dr. FOWLER very aptly remarks, medical education is a form of technical education in which the public should be interested at least as much as in many others for which public money is given. With the rapidly increasing number of subjects in which the student has to be instructed and the cost of providing that instruction the medical schools will be eventually unable to cope, and then, as Dr. FOWLER foresees, they will become, as they should be, in his opinion, clinical schools. There are many other points in Dr. FOWLER'S thoughtful address which merit careful consideration and all who are interested in the status of the practitioner of the future will do well to read it.

The British Medical Association: The Address in Surgery.

Professor R. J. PYE-SMITH was happy in his choice of a subject for the Address in Surgery which he delivered on July 30th, for he took the preventive function of surgery as his theme. In surgery, as in medicine, much may be done by an early recognition of the morbid condition present and its removal by timely operation or other surgical treatment. Always this has been so, but not many years have elapsed since the results of any operation were liable to be marred by septic complications. Suppuration in the wound, erysipelas, cellulitis, and hospital gangrene were all liable to occur, and an operation performed with the best intention was prone to bring about results almost, if not quite, as harmful as the ills which it was intended to relieve. The discoveries of LISTER have altered completely this state of affairs. The surgeon now enters on most operations with a confidence born of experience that no septic complication will occur to interfere with the benefit which the operation will bring to the patient. In the average case the operation is followed by no rise of temperature and healing occurs by primary union. Yet there is in this very immunity in operation a very real danger. There is a very definite risk that an operation may be undertaken for the purpose of diagnosis, when a little further employment of other diagnostic methods would have shown that the operation could effect no good. It must not, however, be forgotten that no operation is without its risk. The value of properly devised antiseptic precautions is great and they can almost certainly prevent sepsis; but in small operations there is always a risk of these precautions being relaxed and thus surgical disasters may arise. Anæsthetics are in surgery of the greatest value; with an anæsthetised patient the surgeon is able to carry out procedures practically impossible of performance on a sentient patient, and therefore the use of anæsthetics is distinctly prophylactic, for they not only prevent the pain but they also enable the surgeon to take more time and therefore to do the operation more carefully than would be otherwise possible. Yet there is an element of risk in anæsthesia and so far as we know at present it will not be possible to eliminate wholly the chance of death under the anæsthetic. There are risks, too, in infection from face-pieces of anæsthetic apparatus but these can be prevented by care. Still, the fact remains that it is not possible to assure a patient or his friends that a proposed operation has no risk; the risk may be small indeed but it is there. Local anæsthesia is far less dangerous and it may well be employed where suitable, and with care even extensive operations may be undertaken and yet only local anæsthesia employed. The extent of the use of one or another form of local anæsthesia may well be increased, with a diminution in the risk of operation. Spinal analgesia produced by injection of a drug within the sheaths of the spinal cord is of comparatively recent introduction and has met with very different reception by different surgeons. While some employ it whenever possible others refuse to attempt the use of the method. Time will show us the extent and the limitations of spinal analgesia; at present its exact position cannot be fixed. It must not be forgotten that general anæsthesia has the advantage of enabling the patient to know nothing of the operation, and this is often of value, for the idea that he will be unconscious is sometimes very soothing to the patient. On the other hand, there are some who dread the idea of losing their senses more than the operation itself. A careful prophylaxis will lead to the choice of that method of anæsthesia which is best adapted to all the circumstances of the case.

Our prophylaxis against hæmorrhage is nearly perfect. With pressure forceps and tourniquets we can limit the loss of blood to a small amount. Tourniquets are hardly so much used as at one time, as it has been found that in many cases the oozing of blood after the operation might equal or exceed the amount lost when no tourniquet is employed. It is true that some of our precautions may be unnecessary. The carbolic spray introduced early in his method by LISTER has long ago retired, for it was found to be not needed, and it is certain that the future will modify greatly the methods and practices of prophylaxis which we now adopt, but while our knowledge is what it is we must adopt them. Shock can be much reduced by due precautions against chilling the patient not only at the operation but previously during the preparation, as in the preliminary bath, and Professor PYE-SMITH suggests that this chilling may explain some of the cases of post-operative bronchitis. One of the most recent methods of guarding against sepsis in operations is the use of rubber gloves and they have a double object. Not only do they protect the patient from the risks of sepsis derived from the hands of the operator and his assistants, but they are also of value in guarding the operator and his assistants from the dangers of sepsis in the patient; and that this danger is by no means imaginary has been often shown by the results of a surgeon receiving a septic wound during an operation.

Professor PYE-SMITH reviewed in turn the several departments of surgery and showed that there was ample scope for prophylaxis in surgery. He pointed out that in suitable cases the instillation of silver solutions into the conjunctival sac of the newly born may be very useful but that to do it to every newly born child is unwise. Myopia can be largely prevented

by careful hygiene in the school, by good light, large print, suitable posture, and proper distance of work. The early treatment of adenoids will prevent many ills but this treatment need not always be operative. In the abdomen preventive surgery finds great scope and appendicectomy will render impossible many serious conditions. As to the exact time which is best for operation in appendicitis it cannot be said that surgeons are agreed. Professor PYE-SMITH is in favour of immediate operation, especially if the case is seen within 24 hours of the commencement of the attack; but the fact is that, as a rule, the surgeon is not called in until more than 24 hours have elapsed since the beginning of the attack and then the treatment to be employed must depend on the conditions found; but at the present time the tendency is certainly to postpone operation till the interval except when some contra-indication is present. Amputation of an extremity is far rarer than it was formerly and this saving of limbs is largely attributable to the antiseptic treatment of injuries. In cancer the true prophylaxis is to remove at the earliest moment any suspicious swelling and even more to treat carefully any morbid condition, such as superficial glossitis, which is liable to go on to malignant disease. The surgeon must think prophylactically. Everything that will impair the efficiency of his operative procedures must be guarded against; everything that can prevent the need for operation must be done. On the family practitioner must chiefly depend the responsibility of early attention to morbid conditions; on the consultant must depend the exactness of the diagnosis. While the members of the profession are guarding the health of the community they must not be negleotful of their own. A weekly rest and a yearly holiday are essentials for every surgeon and this prophylaxis will enable him to carry out more fully and more efficiently the care of his patient. The address was stimulating and while it urged the early surgical treatment of morbid conditions it served also to warn the profession of the greater value still of carrying the prophylaxis farther back so that the graver lesions do not occur.

Annotations.

"Ne quid nimis."

FACTORIES AND WORKSHOPS.

THE annual report for the year 1907 of the Chief Inspector of Factories and Workshops (Dr. B. Arthur Whitelegge) has recently been issued, and, as is invariably the case, it contains a number of interesting contributions and observations connected with the working of the Factory and Workshops Act. It is not possible to deal in the space now at our disposal with many of the able reports published in this document, in which the general report takes up 39 pages and the sectional and special reports with tables 321 pages, but for the present we may refer briefly to those investigations which appear to us to present some novel developments. The report of the electrical inspector, for example, shows how seldom is the danger realised of the use of defectively constructed electric hand-lamps. Photographs are given of three hand-lamps each of which had been the cause of the death of a man. The danger arises from the construction of the lamp being such that any metal work used is very liable to become electrically charged. If a person holding such a lamp happens to be standing on metal floor plates or on damp ground, or is otherwise in connexion with earth, he may get a shock and in all probability will be unable to release his hold of the lamp and a fatal result may ensue. In each case the current was alternating and supplied at low pressure. It is shown that owing to faulty construction the metal guard protecting the lamp has tapped the current and in spite of an insulating handle the current has reached the person holding the lamp with a fatal consequence. The inspector carefully points out the obvious defects of these lamps and the direction in which the prevention of accidents of this kind lies. He further remarks that the danger of electric shock at low pressures is often not realised. The term "low pressure" with many people appears to imply an absence of danger and precautions are consequently not infrequently overlooked. A summary of the tables given in his reports for the past six years shows that there have been three fatalities from continuous current and 22 from alternating current at 250 volts pressure or less. In regard to the manufacture of lucifer matches several important investigations were made during the official year. It appears that since 1904 no case of phosphorus necrosis has been reported except from one factory. This was the case of a man, aged 60 years, who owing to infirmity sat constantly at the dipping table. Moreover, he was less able to leave work frequently to wash his hands, and as he chewed tobacco habitually there was more risk of carrying phosphorus to the mouth. The circumstances were exceptional, but in view of the repeated attacks in this factory and the intended revision of rules it was decided to institute an inquiry, and Mr. K. W. Goadby was appointed to visit all the factories in which white phosphorus is used. He found that in one or two of the works, notably at the factory in question, the dental supervision required by the rules had not been sufficiently thorough. Suggestions are made by which the present rules can be strengthened. As Dr. Whitelegge points out, if the public would accept safety matches or even non-phosphorus strike-anywhere matches (in place of the familiar phosphorus matches) the danger of necrosis would be obviated in the simplest of all ways, but there appears to be a prejudice against the former on the score of inconvenience and against the latter because they are supposed to be less easy to strike, to ignite too readily or too violently, or at too low a temperature, to be less resistant to damp, or to deteriorate more rapidly on ordinary storage. Part of the general report deals with the very interesting and important subject of standards of ventilation. The difficulty hitherto of carrying out analyses of air representing the individual supplies of millions of workrooms is referred to. As is shown, the difficulty has been lessened by adopting for routine sampling the method proposed by J. S. Haldane. This method has enabled the inspectors to measure the ventilation in terms of CO_2 in a large number of rooms, including many to which no standard is at present applicable. The results have been of material assistance in the enforcement of the requirements of Section 7 even without applying standards and they promise to afford useful indications for further action. Under the heading of ventilation the question of securing and maintaining a reasonable temperature in each workroom by methods which shall not render the air impure is naturally considered. In many instances it has been found that no provision whatever has been made other than unventilated gas jets which contaminate the air. An interesting report is that communicated by Dr. John Hay on the conditions of the workers employed in the manufacture of shuttles from African boxwood. It appears that the dust of this wood has singularly deleterious effects on the health of the

"shuttle worker." Dr. Hay concludes that the sawdust acts in two ways: (1) locally on the mucous membranes as an irritant; and (2) by virtue of the alkaloid which it contains and which is absorbed. Such are only a few examples of the diseases and dangers arising out of industrial occupations which amongst others are dealt with in Dr. Whitelegge's report. We must defer for a future number the consideration of other equally important matters.

THE MARATHON RACE.

THE pitiful condition of most of the runners at the close of the Marathon race and the tragic failure of the leader to reach the tape unassisted when victory was apparently within his grasp have been discussed in the press only from the point of view of their intense human interest and of the pluck which the competitors have exhibited. But to those of the spectators who were members of the medical profession questions of high scientific interest must have suggested themselves. A man who has run gamely for 26 miles breaks down somewhat suddenly at the finish and so completely that he is unable to cover the few yards required for the victory which he so well deserved. What is the actual mechanism of the breakdown? A short race is won purely by the neuro-muscular system, there is no time for cardiac failure in 100 yards. In somewhat longer races such as the quarter and half mile, and even in the mile, the cardiac factor becomes predominant: there is time for acute dilatation to occur and the question of "wind" in such races must be largely a matter of the heart. But in long-distance racing the phenomena of the final collapse seem to be of a different order, involving not only the neuro-muscular system and the circulatory and respiratory systems but even the special senses. Information on many points is required to decide the exact nature of the condition in such collapse as was exhibited by Dorando in the Stadium and it would be of interest to know whether any exact observations were made upon the competitors as they arrived by the medical men in attendance. Such observations should certainly be published. What was their internal temperature? Certainly very high, after some three hours' severe exertion on a hot and close day, but was it high enough to account for the symptoms exhibited? Probably not. What pulse-rates did they manifest and what was the area of cardiac dulness? Some degree of dilatation must have been present, yet the phenomena seen were certainly far beyond those of cardiac failure alone. Mere respiratory difficulty cannot be thought of as the explanation. To say that the men were exhausted is an empty phrase unless we can express the nature of the exhaustion in a scientific manner. Was it an exhaustion of the muscles? Were these in a condition in which they could no longer contract upon nervous stimulus? Were they so overloaded with metabolic products as to become suddenly incapable? Or was the exhaustion one primarily of the nervous system? This seems more probable, for it would appear from the accounts of the spectators that Dorando became practically unable to see or to hear when he entered the arena. The special senses were involved in the exhaustion as well as the faculty of muscular activity. But why should the nervous system suddenly give out? Is it poisoned by an auto-intoxication due to products of excessive muscular metabolism, or does it cease to act after a certain excessive degree of action? The metabolic changes might have been studied in part by chemical examination of the urine first passed after the close of the race. Was any advantage taken of an opportunity so rare? These are but some of the questions which arise in the mind of the medical man who witnessed the closing stages of the Marathon race. In part they may be answered by those who had the opportunity of examining the competitors on their arrival. In part they may be solved by laboratory experiments. They are of engrossing interest as involving the phenomena witnessed at the extreme of human physical endurance.

A DIRTY AND DANGEROUS CUSTOM.

THERE is a very prevalent practice all over the country of serving customers with pieces of meat or fish wrapped up in portions of newspapers. It is a cheap wrapping and so commends itself to both the butcher and the fishmonger. But if it is cheap it is also nasty. Printer's ink itself as an article of diet is not tempting, but it is not pleasant to think of the travels and adventures of these papers, of the hands through which they may have passed and the places which they may have visited. Nor must the possible contact with cases of infectious disease be forgotten. Any meat or fish fit for human consumption, even in the small quantities sold in the poor districts, ought to be worth a piece of clean paper. This practice of using dirty, second-hand pieces of newspapers of various grades is not confined to poor shops in the slums but prevails even among high-class purveyors of meat and fish. It is quite time that this dirty and dangerous custom should be given up and that the public should insist on greater cleanliness in the treatment of food so easily tainted as is meat or fish.

SHOULD MEDICAL OFFICERS OF HEALTH ACT AS EXPERT WITNESSES?

THE expert witness does not, unfortunately for the cause of truth, occupy a very enviable position, and there are many persons who would be found to agree in some measure with the far from complimentary definitions of him which have gained currency, although perhaps they would hardly care to go so far as the brother of a very famous expert witness whose name was John. On hearing the definition which ranks the expert as the third and worst degree of truth-distortion, he added, "No, you are wrong, there are four degrees, and the fourth is my brother John!" It is certainly difficult at times to take the expert witness seriously and it is not altogether surprising to find that in some cases the evidence of the experts on one side is set-off against that of those on the other and the whole deleted, as it were, from the argument. Moreover, the "trimming" of witnesses under cross-examination is not a thing of which serious scientific men can feel either proud or satisfied. But it is nevertheless difficult to understand in what manner, having regard to the relative ignorance of judges and juries upon scientific matters, the truth is to be otherwise unravelled unless, perhaps, by the association of scientific assessors with the judges. But the position of a public official, such as a medical officer of health, when called upon to give evidence is, or should be, a different matter and, generally speaking, his evidence should in his own domain be the most trustworthy which can be obtained. Nevertheless it is obvious that if a whole-time medical officer of health obtains a reputation as a somewhat opportunist expert the demands upon his time leading to his absence from home for days together, or perhaps, what it worse, for a whole day at frequent intervals, cannot be regarded with equanimity by the local authority. But so long as the present method of employing expert witnesses is continued it is not, we think, altogether in the interests of justice that the medical officer of health should be entirely prohibited from giving evidence in certain circumstances, more especially in cases where sanitary authorities are employing their own medical officer of health

as an expert in support of some action against property owners. Admitting for the moment that the best and least prejudiced evidence is likely to be furnished by those occupying honourable and responsible public positions, it seem hardly fair that such evidence should not be procurable by both parties. It would appear, however, that the Birmingham corporation has recently taken a somewhat strong view in reference to evidence given against it by Dr. H. Cameron Kidd, an able and, we gather, part-time, medical officer of health in the neighbourhood of Birmingham. The corporation was endeavouring to secure the closing of two houses which were apparently interfering with the light and ventilation of adjoining houses and it is to be assumed that without doubt the corporation in taking this action was animated by that high sense of public duty which nearly always characterises the administration of our larger public bodies. The result, however, was that the closing order asked for was refused unanimously and we gather that the evidence of Dr. Kidd already referred to was in some degree responsible for the defeat of the corporation. At all events, the town clerk of Birmingham acting, it would seem, upon instructions from the housing committee of the corporation and in the circumstances very fairly set forth in our columns on June 20th (p. 1796), wrote to the sanitary authorities for whom Dr. Kidd acts as medical officer of health, protesting at his having given evidence against the corporation. As a result of this protest the Property Owners' Association of Birmingham has in its turn protested against the action of the town clerk and it points out that "the advantage on the side of the committee who fight at the public expense and retain as many experts as they please is sufficiently overwhelming without seeking to deprive the unfortunate property owner of the right to have his case supported by the best evidence he can obtain." As to the actual merits or demerits of the property here in question we prefer to remain silent, but we must confess that on a basis of equity and fair-play the contention of the Property Owners' Association is a strong one, and on the facts before us we doubt whether the town clerk was justified in the action which he took, more especially so if, as we believe, Dr. Kidd is a part-time officer who is not supposed to devote the whole of his time to the duties of his public office. Each medical officer of health must, it seems to us, unless and until all expert witnessing by these officers is prohibited by the Local Government Board, decide for himself what shall be his relations with his colleagues in the public service, but at present we do not see our way to suggest that the owners of property should be deprived of the only expert evidence which is often of any practical value to them.

DAIRY FARMERS AND THE STRAWBERRY SEASON.

A VERY interesting report from the public analyst for West Sussex (Mr. Otto Hehner) was before the meeting of the county council for the western half of the county of Sussex on July 23rd. Mr. Hehner had submitted to him during the quarter ended June 30th 36 samples of milk. 29 out of the 36 fully complied with the requirements of the milk regulations of the Board of Agriculture; five were deficient in fat, raising a presumption that they had been partly skimmed; while two contained 67·2 and 70 grains of boric preservative per gallon. And Mr. Hehner goes on to say: "Although members of the Sussex Dairy Farmers' Association had urged that the fat requirements as laid down by the Board of Agriculture were too high, all his experience, ranging over more than 30 years, convinced him that no farmer who properly fed his cattle and understood his business need fear that the milk fell short of the standard. It was a remarkable fact in reference to the farmers' complaints that they are expressed almost every year in the middle of the summer when the strawberry season has arrived and the consumption of cream is abnormal. As regards the samples containing boric preservative it is satisfactory to note that instances of the addition of chemicals to milk are very rare in west Sussex. There is no justification whatever for so pernicious a practice which is clearly against public interest." The county council passed the report practically without comment. At the two previous meetings of the council strong complaints were made concerning the small fines that were imposed upon purveyors of milk when summoned for selling milk which was not of the nature, substance, and quality demanded by the purchaser.[1] It may be that the protests made have not only had an effect upon the justices but upon milk-sellers as well.

THE PROPOSED REFORMATION OF THE THAMES CONSERVANCY AND ITS RELATIONSHIP TO THE METROPOLITAN WATER-SUPPLY.

LAST week we devoted a leading article to the consideration of several points raised in recent reports issued by the Metropolitan Water Board. Such multiple problems are involved in any attempt to deal broadly with the water-supply of London that it was impossible to touch on them all in a single article. We are impelled to return to the subject by information which is to hand concerning another and very important side—namely, the future sanitary contro of the Thames in its reaches above the intakes of the London supply. This control is in the hands of the Thames Conservancy but there is every likelihood that that body will undergo a considerable modification when the Bill to create a new authority for the Port of London passes into law. The Bill contains a clause laying down a reformed constitution for the Thames Conservancy, and we understand that the committee which considered it has recommended that the authorities interested shall be represented upon it in the following proportions. The conservators are to be 38 in number and of these 13 will represent riverside districts; 11, districts receiving water from the Metropolitan Water Board; 3, the Board of Trade; 3, the London County Council; 2, the Metropolitan Water Board; and 2, the City of London, whilst the interests of the Surrey and Middlesex county councils, the Port Authority, and the Thames Bargeowners will each be looked after by one representative. The composition of this body foreshadows a confliction of interests which, though hardly apparent to a casual inspection, is so vital that the committee has introduced into the Bill, wisely as we think, a default clause, laying down that any constituent authority may represent to the Local Government Board that the Conservancy, as a whole, is failing in its duty. The point at issue is well defined. London drinks Thames water and wants it to reach its Water Board's intakes as pure as possible. The up-river towns, if they can supply their needs in any better way, do not drink Thames water, but do discharge their sewage effluents into it, even though it be in a more or less indirect manner. In times of flood a large proportion of the sewage washes into the river practically "untreated," and a liberal quantum of animal excrement is added from farms and meadows draining into the river. The consequence is that the metropolitan water engineers have to deal with raw river water of which, on a twelvemonths, average, 82 samples per cent. contain from 1 to 10 of the bacillus coli per cubic centimetre; 46·8 per cent. contain from 10 to 100 per cubic centimetre; and 0·4 per cent. contain over 1000 per cubic centimetre, as appears in

[1] See THE LANCET, Dec. 7th, 1907, p. 1632, and May 16th, 1908, p. 1457.

Dr. A. C. Houston's recently published report for the 12 months ending March 31st, 1908. Obviously, then, it would greatly lighten the task of the Board's engineers and greatly increase the safety of metropolitan consumers (who, as our readers are well aware, habitually receive bacillus coli in their tapwater) if the sewage arriving at the intakes were in considerably more dilute solution than is the case at present. But any system which would insure such an adequate treatment of the sewage of up-river districts as would make their effluents of comparative bacteriological purity by methods that could be trusted not to fail in flood time would obviously involve those authorities in considerable expense and they would not unnaturally consider themselves aggrieved if they were put to it compulsorily in order to meet the exigencies of the metropolis, for London is a city which is very much better off than they are themselves. On the other hand, it is obvious that London cannot provide them with perfect systems of sewage disposal; that would be to upset the very foundation of local responsibility and self-government. In order to appreciate the extent to which the problem is likely to vex the new Conservancy we have made inquiries concerning the drainage and water-supply of the various up-river authorities which are to be represented upon it. We find that the effluents from the sewage works of Wallingford and Abingdon are discharged into the Thames, that of Maidenhead into a Thames backwater, that of Oxford into the Northfield Brook at Littlemore, and so to the Thames; that of Reading into the main river viâ the Kennett; whilst those of Windsor, Old Windsor, and Henley, though not discharged into the river, can certainly percolate into it. Of these towns, Old Windsor, which is supplied by the South-West Suburban Company alone, derives some of its water from the polluted Thames, Oxford drinks from the river but above its sewage outfall, and so, for the purposes of the inquiry, is on the same footing with all the other authorities, which are supplied by wells and borings and have no hygienic interest in keeping the river clear of sewage bacteria, but have a decided interest in keeping down the expenses of their sewage disposal consistent with their own well-being. Seeing what a compact little force their representatives will form on the new Conservancy if the Bill passes as it stands at present it seems to us a matter of regret that the London County Council has only secured three seats on the Conservancy and the Metropolitan Water Board only two. Both bodies are vitally interested, the one having to safeguard the health of the largest collective population that the world has ever seen, the latter having to see that the raw water of its chief supply shall be of reasonable purity. It is true that the districts supplied by the Board are to have a good representation but we consider that the two bodies which we have mentioned have sufficiently vast and direct responsibilities resulting from the London water-supply to entitle them to greater direct influence than it is proposed to give them upon the reconstituted sanitary authority for the River Thames.

THE DANGERS OF THE SWIMMING BATH.

IN the *Boston Medical and Surgical Journal* of July 2nd Dr. C. M. Cobb has called attention to certain dangers from diving in swimming baths. He has treated a number of cases of ethmoiditis and acute otitis media which were apparently due to this cause. The baths appeared to have been kept as clean as possible, but, of course, they could not be kept sterile, and even if they were sterilised the first swimmer that entered would contaminate them. People would not put their heads under the water of an ordinary private bath after using it and this is washed after each time that it is used. Yet they do this in the public swimming bath which is never washed and which is used by others. Dr. Cobb reports the following cases. A lad, aged 17 years, went to a swimming bath five times and then sought advice for acute ethmoiditis, worse on the right side. He had moderate fever for a few days but soon improved under treatment. He was warned against the swimming bath but would not believe that he had acquired his nasal disease there and again visited it. A fresh attack promptly followed. A third attack was necessary before he was convinced of the danger. On giving up diving in these baths he became free from the disease. In the following cases the disease did not originate in a swimming bath but in a lake on the shore of which was a large camp for boys. The water was so shallow that the bottom was disturbed by diving. In one case the inflammation was not so severe as in the first case but the ear was also affected. In a third case a lad, aged 20 years, lived in a camp with a large number of others and they swam and dived in the lake. On one occasion after swimming he felt a fulness in the left ear. He consulted Dr. Cobb who found that he was suffering from subacute otitis media which lasted some weeks. He recovered with considerable loss of hearing in the affected ear. The infection was mild but very persistent. In a fourth case a boy, aged 14 years, was seen for double ethmoiditis and double acute suppurative otitis media. He had been freely swimming and diving in a swimming bath at a gymnasium. A few days before he was seen he felt a very unpleasant sensation in the ears after diving. Before morning earache began and two days later a discharge from both ears appeared. Examination showed double ethmoiditis, discharge from both ears, and tenderness of the left mastoid. Long and persistent treatment was required to bring about recovery. These cases are selected out of a large number of similar ones due to the same cause.

THE ANNUAL REPORT OF THE COMMISSIONERS IN LUNACY FOR SCOTLAND.

As the years go by the reports of the Commissioners in Lunacy become more and more valuable not only because of their gradually increasing intrinsic worth but because of the invaluable comparisons which may be made with past reports. The fiftieth annual report of the Commissioners in Lunacy for Scotland is this year of considerable interest in its disclosure of certain facts bearing upon the frequency of occurrence and age distribution of insanity in that country. It appears from the tables that in 1885–86 every 100,000 persons living sent 98 patients to establishments for the insane, whereas the same number of the population in the years 1896–97 sent 116 patients to such establishments. All age periods contributed to this increase, the largest percentage of increase occurring in the earliest and latest of life periods, although the middle periods contributed very materially to the result. Figures relating to the past two years show very different results. Every 100,000 persons sent 111 patients to establishments instead of 116, while there has been a very substantial decrease of persons between the ages of 20 and 50 years who have been thus disposed of. The Commissioners point out that this marked decrease occurring in the last ten years during the periods embracing early adult and mature life is a remarkable fact which until their returns were obtained was not known or suspected. In the very earliest periods of life there was a slight and wholly unimportant rise, while for the latest periods of life there has been as marked a rise for 1906–07 over the corresponding figures relating to 1896–97 as there was for these years compared with the figures relating to 1885–86. The figures for the years 1885–86 showed that the existence of conditions necessitating removal to asylums were least active in the earliest years of mature life and became

gradually more active until middle life was reached when the numbers began to decrease. The figures for 1906–07 show, on the other hand, that while the liability to insanity in forms calling for institutional care is also least in youth it becomes from that time regularly greater up to 80 years of age. The Commissioners regard these figures as an indication of the satisfactory condition of the health of the community at ages which are of the greatest account in the life of the nation. The rapidly increasing number of the insane resident in establishments which has of recent years excited so much disquietude may in large measure be ascribed to the rapidly increasing proportion of persons over 60 years of age who are now housed in asylums. So far as the recovery-rate is concerned it appears that among private patients it has varied but slightly from year to year and to such a small extent as not to afford any certain indication of progress, but among pauper patients a continuous decrease in the rate has been noted. The explanation of this is chiefly to be found in the accumulation of chronic patients and in part also to the increased use of observation wards in certain parochial hospitals which receive persons suffering from transient attacks of mental disorder who, in the absence of such wards, would have been received in asylums and who would have gone to swell the recovery rate. It is also to be noticed in this connexion that persons suffering from incurable physical diseases and who also show symptoms of mental unsoundness are now sent to asylums instead of being kept in the infirmaries. The report is one which may certainly afford a considerable degree of comfort. The alarming rate at which during recent years it has been supposed that insanity is increasing is gradually being shown to be due in part to the increased supervision of the insane with the consequent yearly publication of statistics reporting an increase in the numbers of officially recognised lunatics and to be also due to that which must be of considerable gratification to the alienist—namely, the decreased distrust of asylum treatment on the part of the public and an increased willingness to regard institutions for the insane as curative agencies and as hospitals, and not as places analogous to prisons where lunatics are confined.

A CONTROVERSY ABOUT TEA.

A CONTROVERSY which has long been settled in the minds of scientific men has been revived by trade partisans. The persons, on the one hand, whose business it is to sell China tea affirm that Indian tea was long ago tabooed by medical men because unless it is prepared for use under very careful directions it contains an excessive amount of astringent substances known to chemists under the generic name of tannin. On the other hand, the parties interested in the sale of Indian and Ceylon teas declare that China tea is objectionable because the leaf is prepared under unwholesome conditions, that it sustains in fact contamination owing to its manipulation by hand, whereas Indian and Ceylon teas are immaculate in this respect because nothing is concerned in their manufacture and production for the market but machinery. To this view many tea connoisseurs reply that the æsthetic qualities of the tea leaf are injured considerably by the mechanical means adopted. The disparaging statements in regard to China tea, which are based on the fact that it is prepared by hand, may, we think, be disregarded, for it is hardly conceivable that any serious contamination can arise and if it did any disease organisms that survived the process would be destroyed in the teapot. It is well known that, apart from boiling, an infusion of tea is antagonistic to the life and development of micro-organisms, and this appears to be specially the case in regard to the typhoid organism. The objection to the manipulation of tea by hand instead of by machinery has about the same logic on its side as has the objection to the grape being trodden under foot before the wine is produced. No one gives much thought to this fact when drinking a favourite claret. The fact is that the tendency of a fermentative process is to exclude adventitious impurities, and fermentation is essential to the production of both tea and wine. The argument in favour of China tea on the ground that in general it is far less astringent than is Indian tea rests on a scientific basis, and there we are content to leave the controversy. It is idle and impossible for the advocates of Indian tea to deny that their favourite commodity contains and yields when infused a much larger amount of tannin than for the most part do China teas. The latter, in fact, are altogether more delicate in character and certainly more suited to the requirements of persons with delicate digestive apparatus. If a dyspeptic is permitted to drink tea at all that tea should be China tea, because as a rule it is much less astringent and therefore less likely to derange a delicate digestive system. Analysis has proved this again and again, and it is a confidence which has no reason behind it which asserts anything to the contrary. There can be little doubt that if it were not for the habit of adding milk to tea, which in the circumstances is a perfectly correct physiological though perhaps not æsthetic proceeding, the infusion of a powerful Indian tea would produce infinitely more harm than it does. On the other hand, China tea, owing to its delicacy, is frequently consumed without milk, some persons choosing the Eastern method by adding to it a slice of lemon. There is, after all, very little to be said against the stronger teas so long as they are prepared under the simple precaution which excludes the greater part of the astringent substances from passing into the infusion—namely, by allowing the tea to "brew" for only a few minutes. That precaution, however, is not so necessary when China tea is chosen.

THE BIRTHPLACE OF ROBERT LISTON.

THE parish church of Ecclesmachan, Uphall, near Linlithgow, is now undergoing renovation and enlargement, and the Kirk Session proposes to place in the building a suitable memorial of the famous surgeon who was born in the parish manse on Oct. 28th, 1794. Robert Liston was the son of the Rev. Henry Liston, minister of the parish, who has left a name as a writer on music and as the inventor of an organ. Liston studied and taught at Edinburgh before he came to London in 1834. In the following year he became professor of clinical surgery at University College. He was elected a Fellow of the Royal Society in 1841 and died in 1847. The memorial suggested takes the form of two small windows in the new chancel, with a commemorative tablet in the porch. It is hoped that members of the Royal Colleges of Surgeons of England and Edinburgh, the Medical Faculty of University College, and the Glasgow Faculty of Physicians and Surgeons, will contribute to the cost (some £70) in recognition of Liston's claims to remembrance. The Rev. Alex. Brown Grant, B.D., minister of Ecclesmachan, will be happy to receive subscriptions or to furnish further information.

THE BODY AND THE BRAIN.

APART from the political significance that is being given in some quarters to the spending of ratepayers' money in giving free meals to poor school children, the experience of the Brighton education committee is worthy of record. Here are the year's operations:—

Free meals granted	86,202
Penny tickets sold...	2,409
Average free meals per day (May to July)	98
Average free meals per day (October to April)	620
Highest number of meals per day (February)	805
Lowest number of meals per day (June)	82

Parents have testified to the benefit that the children have derived in health and strength, and the teachers' efforts have been rewarded with greater success than hitherto. The education committee on July 21st unanimously decided to spend another £500 on free meals during the ensuing year. In the first twelve months just ended £500 were spent on the cost of food only, nothing being included for administration and cooking. The canteens are formed on the school premises and they are supervised by a number of ladies and gentlemen and the head and assistant teachers, all the work being done quite voluntarily. The figures given show that their work has been no sinecure. Responsible as it is for the intellectual attainments of the rising generation, the education committee in carrying out the provisions of Section 3 of the Education (Provision of Meals) Act, 1906, is also fostering the children's physical welfare.

THE President and Vice-Presidents of the Royal College of Surgeons of England have sent their congratulations to their ex-President, Mr. Jonathan Hutchinson, on the occasion of his eightieth birthday. Only a few days ago the same graceful compliment was paid to Mr. Thomas Bryant, and to both these great exponents of surgery we wish also to pay the respectful greeting due to their eminent services to science.

WE much regret to announce the death on Monday last, July 27th, of Sir Thomas Stevenson, M.D., the famous toxicologist and senior scientific analyst to the Home Office.

FOUNDER'S DAY AT EPSOM COLLEGE.

FOUNDER'S DAY was celebrated at Epsom College on Saturday, July 25th, when a large number of parents and friends of the boys, as well as of governors of the College, were present. The proceedings commenced with a choral service in the College chapel at 2.45 P.M., after which the company reassembled in the big schoolroom for the distribution of the prizes. On the platform were the head-master, the Rev. T. N. H. Smith Pearse, Sir William S. Church, (chairman of the council), Mr. Henry Morris (treasurer), Sir Constantine Holman, the Rev. E. W. Northey (deputy-chairman of the council), Dr. F. de Havilland Hall, Mr. W. A. Propert (grandson of the founder), Mr. Clement L. Smiles, Dr. Frederick Taylor, Mr. J. B. Lamb (secretary), and the assistant masters of the College.

The HEAD-MASTER reviewed the work of the school during the past year and drew attention to the fact that the present number of boys (270) was the highest on record. Since last Founder's Day an open exhibition in classics had been gained at Jesus College, Oxford, and a studentship at Liverpool University. At the London University Preliminary Scientific Examination in July, 1907, 13 boys entered, all of whom, with one exception, were successful. 16 boys passed the London Matriculation Examination and 11 obtained higher certificates of the Oxford and Cambridge Schools Examination Board. Referring to former pupils, the head-master mentioned that Mr. Henry Morris had been re-elected for the third year President of the Royal College of Surgeons of England; A. C. C. Parkinson, Demy of Magdalen College, Oxford, had obtained a first class in final classical schools and was placed ninth in the examination for the Home and Indian Civil Service; and R. W. Ardagh had passed into Woolwich, thirty-fourth place, three or four months after leaving school. In conclusion, the head-master referred to the important extension of buildings which had been and was still in progress, and expressed the hope that the "Markham Skerritt" science block would be in use when they met to celebrate Founder's Day next year. The new physical and biological laboratories would be greatly appreciated.

The chief prizes were given away by Sir WILLIAM CHURCH, who subsequently addressed the boys as follows:—

"It gives me very much pleasure to come among you to-day and take part in giving away the prizes at the end of your school year. I do not come as a stranger, for, as you know, I have for some years been a member of the council of your school and in the few remarks I may make I think you may consider that I am speaking for the council as well as for myself. I know no pleasanter days than those which bring us down here to take part in this or some of the other of your annual school gatherings. Many of us are, I am afraid, getting old, but I know no way of keeping old age at bay so good as mixing as much as you can with those younger than yourself and calling in mind, so far as you are able, your own feelings at a corresponding age. I think I may conclude from the bright faces I see around me that you are much of the same opinion that I used to be at the end of the summer quarter, which was that I was fortunate in being a member of the best possible school. I do not say that I was right in that opinion or that you are right in holding the same of Epsom, but I do know that it is the opinion we wish you to hold, whether it is right or wrong. It is our wish and endeavour that you should be healthy and happy here, as well as that you should receive, as you do, the best of instruction to fit you for the fight you will have to maintain during your future life. Let me now congratulate the prize-winners of to-day, and I do so most heartily, and envy the feelings with which they will return home bearing these substantial tokens of their success. Yet I would not have you place too high a value on school successes; the mere fact, possibly in some cases the mere accident, that you have gained a few more marks in your competition than your fellows is not in itself a thing to be proud of. What is of value to you now and hereafter, and which you may well be proud of, is the knowledge that you have made an effort, that you have done your best, and that in your cases the effort has had the good fortune to be crowned with success. To my mind, therefore, all those who have truly and honestly tried to do their best in school work or play are equally deserving and may go home equally contented with themselves as those who are the fortunate prize takers. I regard a public school like this as much more than a place where you gain instruction. It is here that your characters are formed; and much more depends on that for your future success in life than in your knowledge of Latin or Greek, history, or the sciences. We hope and believe that there is among you, and ever will be at Epsom, an ardent love for the honour of our school, and that the spirit which is present here may be such as we should wish to influence you throughout life, a reverent regard for all that is honest, true, and noble, and a detestation of all that is sordid or mean. Be honest and thorough both in your work and play. Remember that anything that is worth doing is worth doing as well as you can. Be loyal to yourselves, your school fellows, to the head-master, and your other masters. Let this be the spirit that pervades Epsom, so that it may influence you throughout life, and when in dangers and difficulties hereafter that spirit may aid and assist you, and in the words of a song of my old school, when you have passed on into the sea of life you may always be—

'True as steel
In your zeal
For the honour of the school.'"

Mr. HENRY MORRIS (treasurer of the College), in proposing a vote of thanks to Sir William Church for his address and for distributing the chief prizes, paid a tribute to the valuable services rendered by Sir William Church as chairman of the council. After referring to the many recent improvements and additions to the College buildings, Mr. Morris remarked that they must not think the council were indifferent to the classical side of the school because so much was being done to improve the accommodation and equipment of the science side. On the contrary, he expressed the opinion that the study of Latin and Greek was of great value to boys who were destined, as they were, for the services, the several learned professions, and for teaching and other such-like callings. The very fact of studying science made a certain amount of knowledge of the classical languages requisite if they desired to get a ready understanding of the meaning of scientific terms. The medical student especially would find it a great drawback when meeting with the many and constantly increasing technical words not to be able to make out their etymological signification and to have, as in the instance of a student he had recently heard of, to put on a "coach" to teach him enough Greek to enable him to understand the names he was

constantly encountering in his science studies. After associating himself with all that had fallen from the head master and Sir William Church as to the importance of character as well as of brain power and mental training, Mr. Morris alluded to the success of the Epsom boys at the London University Preliminary Scientific Examinations, especially on the last occasion when, as mentioned by the head-master, there were 13 candidates, all of whom passed with the exception of one. This was the best answer to those who, like the writer of a letter in that day's *Times*, contended that the preliminary science subjects required for the medical profession could not be adequately taught at boys' schools. He quoted from Huxley and from an address given by Sir William Church in 1903 to show that they were in favour of these science subjects forming part of the preliminary education before students entered on their medical curriculum. He hoped that the forecast of the head-master that the free education given to an Epsomian at each of several of the London hospitals would soon have to cease owing to the impecunious state of the London medical schools would not prove correct; and it would not do so, he said, if the preliminary science subjects were eliminated from medical education proper and the examinations in those subjects were passed before the students entered on their strictly medical course. It was quite true, Mr. Morris added, that there was no justification for ten London medical schools to be engaged in teaching physics, elementary chemistry, and biology; but the remedy was not to put up another and a very costly building, whether at South Kensington or elsewhere, whereat to teach these self-same three subjects, but to leave them to be dealt with at the 109 recognised inspected secondary schools throughout the country, like Epsom College, and at the two colleges in London (University and King's), which were colleges of general educational type and in which classes in all the various preliminary as well as advanced science subjects were naturally held.

MEDICINE AND THE LAW.

"*Daisy Powders.*"

AN inquest held at Clapham recently showed that the deceased had suffered from influenza and had called in a medical practitioner who had told him to stay in bed. After a day or two he had complained of severe headache which had become worse and his wife went to summon his medical attendant. This gentleman, however, happened to be out at the time, so at the husband's request she bought for him at a druggist's a "Daisy powder." This he took and shortly afterwards died. Mr. T. H. Wilkins, in his evidence, said that he had treated the deceased for influenza and had not been at all surprised at his death when he learnt that he had taken a "Daisy powder." He described these to the jury as being composed of an extremely dangerous drug and as having been responsible for many deaths through their action upon the heart. The drug referred to was acetanilid. A dose might consist of from one to three grains, but some of these powders, he informed the jury, had been found by analysis to contain from seven and a half to ten grains. He had made a post-mortem examination and attributed death to syncope from a weak heart depressed by influenza, death being probably accelerated by the drug described. The jury in returning a verdict in accordance with the medical evidence added a rider to the effect that the sale of "Daisy powders" ought not to be permitted.

Dependents under the Workmen's Compensation Act.

Those concerned as employers in knowing the extent of their liability under the Workmen's Compensation Act to the "dependents" of a servant killed accidentally while in their service may note with interest a recent case in the City of London court. The claimant was the sister of an engineer who had lost his life through shipwreck, and she claimed against his employers on the ground that he had always contributed £1 a week to the support of herself and her family whether he were at home or at sea. It was stated that this was the first claim made by a sister, and it was resisted on the ground that as a brother was not bound in law to support his sister she was not dependent on him within the meaning of the Act. This view was adopted by Judge Rentoul who held that a sister was not a dependent and gave judgment in favour of the employers.

The Bite of a Savage Dog and its Owner's Liability.

Medical men who from time to time are witnesses of the cruel injuries inflicted by the bites of dogs upon innocent strangers will be interested in observing that the Court of Appeal has laid down definitely the law with regard to dogs kept by persons aware that they have savage dispositions. The case in which the appeal was made was that of a barmaid bitten by a dog owned by the keeper of the public-house where she was employed, and questions were raised as to the liability of the dog's owner in view of the fact that the potman, either by his negligence or by his wilful misconduct, had contributed to what had taken place. Apparently he had had orders to chain up the dog, which had been disobeyed, and his conduct might have been regarded as such that his master could not be held liable for it. The county court judge, as a matter of fact, had taken this view and had non-suited the plaintiff, and the Divisional Court had upheld his judgment. The Court of Appeal laid down the law with regard to a dog known by its master to be savage to the effect that such a brute comes into the same category as the wild beast, the animal naturally dangerous, and is kept at its owner's risk—that is to say, it is not necessary in the case of a dog known by its master to be savage for a person bitten to show that the dog was kept negligently. Nor can the master defend himself by proving that he took every possible precaution to prevent the dog from biting anyone. There is nothing illegal in keeping such an animal, but he who keeps it is liable for any injury that it inflicts. Inconsiderate dog-owners should take warning by this decision.

The Workmen's Compensation Act.

Two cases recently decided by the Court of Appeal under the Workmen's Compensation Act are of interest. In the one the question for decision was whether a workman employed by the London County Council in the sewers under its control had met with an accident, the county court judge having found as facts that he contracted enteritis by inhaling sewer gas while working for the Council, and that the result of the enteritis had been to accelerate heart disease already existing in him, so that he was incapacitated from work at an earlier date than he would have been through the heart disease alone. The county court judge had decided that the enteritis contracted in such circumstances was not an accident within the meaning of the Act and the Court of Appeal took the same view, dismissing the appeal without calling upon the respondent's counsel to argue. In giving judgment the Master of the Rolls said that the case was governed by those decided under the Act of 1897, citing particularly Fenton *v.* Thorley and Co., 1903, A.C., 443; Steel *v.* Cammell, Laird, and Co., 1905, 2 K.B., 232; and Brintons *v.* Turvey, 1905, A.C., 230. The last-mentioned is the case in which anthrax contracted by a workman when handling hides in the course of his employment was held to be an accident but it was pointed out that the judgments on that occasion expressly negatived the supposition that all diseases contracted in the course of a workman's employment were to be regarded as accidents entitling him to compensation. The Master of the Rolls also called attention to the eighth section of the present Act (that of 1906), which provides for certain scheduled industrial diseases being treated as accidents, and to the effect of this section in establishing that industrial diseases not so scheduled are not "accidents." He pointed out that the disease contracted by the applicant before the court was not one of those in the schedule. The other case under the Workmen's Compensation Act referred to affects medical practitioners as dispensers of public and private charity in that the claim brought by a man named Burns against the Manchester and Salford Wesleyan Mission was made on the ground that he had sustained injuries as a workman in their employment. As a matter of fact, he had been given some work to do in the defendants' labour yard as an act of charity, and in doing it had met with an accident. Two questions of law had been raised before the county court judge: (1) whether the defendants carried on a trade or business, so as to render them liable for a workman employed "casually"; and (2) whether the contractual relation of employer and workman existed between them and the claimant of compensation. The county court judge answered both in

the negative, but the Court of Appeal in affirming his judgment did not regard the first as requiring their decision. The Master of the Rolls in giving judgment guarded himself from expressing the opinion that a charity such as that of the defendants did not carry on a trade or business. He also was of opinion that such a charity in dealing with applicants for relief might quite possibly enter into the contractual relation of employer and workman with them. What he held was that the county court judge had decided as a fact that no such relation existed in the case before him and that there was nothing in the evidence which did not justify such a finding. It will be seen from the above that whatever may have been the result of the case of Burns v. the Manchester and Salford Wesleyan Mission, public bodies or private individuals who in the dispensation of alms give "odd jobs" to mendicants and others must be prepared to face claims for compensation should the odd job result in an accident, which perhaps the person likely to be compensated may be not unwilling to endure for the sake of future profit. In other words, such charitable bodies or persons should insure against accidents happening to casual workmen, whether they think they carry on a business and are "employers" with regard to it or not. It is the function of the insurance company either to pay the compensation or to bear the cost of defending claims made against those who insure.

Looking Back.

FROM

THE LANCET, *SATURDAY*, July 31st, 1830.

ON CAMEL'S ITCH.

THE following curious fact was lately related by M. Biett in one of his lectures on diseases of the skin:—Several years ago some camels were brought to the "Jardin des Plantes," affected with an eruption which was speedily communicated to the persons under whose care they were placed. The disease was found to be of a psoric nature, but of great severity, and accompanied with a derangement of the digestive functions. The news of this affection made a great noise in the Faubourg St. Marceau; nobody dared to approach the garden, which was, in the eyes of the people, a lazaretto with the plague. The rumour reached the ear of the authorities, and the minister requested the professors to report on this new scourge. The answer was, that the disease was the itch, but of a more malignant character than usual, and the insect of which was also different from that of the common itch. M. Biett, who was extremely anxious to have a sight of this insect, applied to the professors, but could not get any satisfactory answer, and his impressions are, that none of them had seen it, but had only concluded that the supposed insect of the camel's itch must be different from that of common scabies, and that the inference had actually been given as the fact. However this may be, some of the animals died, and the rest of them were sent to the Veterinary School at Alfort, where M. Biett renewed his researches, but with as little success as before. The persons affected with the camel's itch suffered for a long time from it, and even after their recovery remained subject to itching, so as to make them believe themselves to be affected with an incurable lepra; and one of them being two years afterwards affected with prurigo, actually from despair committed suicide. Another patient, who was one of the keepers of the camels, and was admitted at St. Louis with prurigo, which he considers as a sequela of the camel's itch, is extremely low-spirited, and seems also to have a great tendency to suicide, a sort of monomania, which indeed is not at all unfrequent during the repeated relapses of the disease in question.—*Lanc. Franç.*

MEDICAL CRICKET AT BRISTOL.—The annual cricket match between members of the medical staff of the Bristol Royal Infirmary and the Bristol General Hospital took place at the Gloucestershire county ground on July 23rd. There was a large attendance and after an interesting game the Royal Infirmary team won by 45 runs.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8833 births and 3712 deaths were registered during the week ending July 25th. The annual rate of mortality in these towns, which had been equal to 11·8, 11·4, and 11·1 per 1000 in the three preceding weeks, rose again to 11·9 per 1000 in the week under notice. During the first four weeks of the current quarter the death-rate in these towns averaged 11·6 per 1000, while in London the rate did not exceed 10·8 per 1000. The lowest annual death-rates in the 76 towns during the week under notice were 3·4 in Hornsey, 6·8 in Southampton, 6·9 in Willesden and in East Ham, and 7·0 in Devonport; the highest rates were 16·1 in Liverpool, 16·8 in Bootle, 17·8 in Coventry, and 18·8 in Rochdale and in Rhondda. In London the death-rate during the week was only 11·2 per 1000. The 3712 deaths in the 76 towns showed an increase of 248 over the number in the preceding week, and included 403 which were referred to the principal epidemic diseases, against 299, 332, and 296 in the three preceding weeks; of these 403 deaths, 192 resulted from diarrhœa, 80 from measles, 54 from whooping-cough, 36 from diphtheria, 26 from scarlet fever, and 15 from "fever" (principally enteric), but not any from small-pox. The deaths from these epidemic diseases last week were equal to an annual rate of 1·3 per 1000, the rate from the same diseases having been 1·1 in each of the two preceding weeks; in London the death-rate from these diseases was 1·2 per 1000. No death from any of these epidemic diseases was registered last week in Blackburn, Brighton, Norwich, Southampton, Halifax, or in seven other smaller towns; the annual death-rate from these diseases ranged upwards, however, to 2·5 in Manchester, 2·7 in Walsall, 2·8 in St. Helens, 3·5 in Rochdale, 3·7 in Oldham, and 4·7 in Rhondda. The deaths attributed to diarrhœa in the 76 towns, which had steadily risen from 63 to 137 in the six preceding weeks, further increased to 192 in the week under notice, and caused death-rates ranging upwards to 1·4 in Liverpool, 1·5 in Hanley, in Bootle, in Oldham, in Burnley, and in Newcastle-on-Tyne, 1·6 in Manchester and in Swansea, 2·0 in Middlesbrough, 2·8 in St. Helens, and 3·9 in Rhondda. The fatal cases of measles, which had been 62 and 75 in the two preceding weeks, further rose last week to 80, and caused annual death-rates equal to 1·2 in Walthamstow, in Rochdale, and in Hull, 1·8 in Oldham, and 2·0 in Stockton-on-Tees. The 54 deaths from whooping-cough showed a further considerable decline from recent weekly numbers, the highest death-rates from this disease being 1·1 in Walsall and 1·2 in Rochdale. The 36 fatal cases of diphtheria slightly exceeded the number in the previous week, and caused death-rates ranging upwards to 1·3 in Reading and 1·5 in Wallasey. The 26 deaths from scarlet fever and the 15 referred to "fever" differed but little from the numbers returned in the two preceding weeks, and caused no exceptional mortality in any of the 76 towns. The number of scarlet fever patients under treatment in the Metropolitan Asylums and the London Fever Hospitals, which had been 2529, 2597, and 2573 at the end of the three preceding weeks, had risen again to 2665 on July 25th; 423 new cases were admitted during the week, against 322, 437, and 349 in the three preceding weeks. The deaths in London referred to pneumonia and other diseases of the respiratory organs, which had been 120, 106, and 104 in the three preceding weeks, rose again to 121 in the week under notice, and slightly exceeded the corrected average number in the corresponding week of the five years 1903-07. The causes of 43, or 1·2 per cent., of the deaths registered in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leeds, Bristol, West Ham, Newcastle-on-Tyne, Hull, Nottingham, Leicester, and in 47 other smaller towns; eight uncertified deaths were, however, registered in Liverpool, five in Sheffield, four in Birmingham, three in Manchester and in Warrington, and two in Bootle, in South Shields, and in Newport (Mon.).

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal

Scotch towns, which had been equal to 12·5, 13·2, and 12·9 per 1000 in the three preceding weeks, rose again to 14·3 in the week ending July 25th. During the first four weeks of the current quarter the annual death-rate in these eight towns averaged 13·2 per 1000, and exceeded by 1·6 per 1000 the rate during the same period in the 76 English towns. Among the eight Scotch towns the death-rates during the week under notice ranged from 10·4 in Edinburgh and 11·7 in Leith, to 16·8 in Paisley and 17·9 in Dundee. The 505 deaths in the eight towns showed an increase of 52 upon the number in the previous week, and included 66 which were referred to the principal epidemic diseases, against 59 and 54 in the two preceding weeks; of these 66 deaths, 30 resulted from diarrhœa, 25 from whooping-cough, six from measles, three from scarlet fever, and two from "fever," but not one from small-pox or diphtheria. These 66 deaths were equal to an annual rate of 1·9 per 1000, the mean rate from the same diseases in the 76 English towns during the week being 1·3 per 1000. The deaths attributed to diarrhœa in the eight towns, which had been 29 and 26 in the two preceding weeks, rose again to 30 in the week under notice, and included 19 in Glasgow, five in Dundee, and three in Edinburgh. The fatal cases of whooping-cough, which had been 13, 17, and 19 in the three previous weeks, further increased last week to 25, of which 16 were registered in Glasgow, five in Dundee, and three in Greenock. The six deaths from measles also showed an increase upon recent weekly numbers, and included four in Aberdeen. All the three fatal cases of scarlet fever were recorded in Glasgow; while of the two deaths from "fever," one, of enteric, occurred in Edinburgh, and one, of cerebro-spinal meningitis, in Glasgow. The deaths referred to diseases of the respiratory organs in the eight towns, which had been 51 and 63 in the two preceding weeks, declined again to 50 in the week under notice, and were fewer by 13 than the number returned in these towns in the corresponding week of last year. The causes of 17, or 3·4 per cent., of the deaths registered in the eight towns during the week were not stated or not certified; in the 76 English towns during the same week the proportion of uncertified deaths did not exceed 1·2 per cent.

HEALTH OF DUBLIN.

The annual rate of mortality in Dublin, which had been equal to 20·0 and 18·4 per 1000 in the two preceding weeks, further declined to 17·2 in the week ending July 25th. During the first four weeks of the current quarter the death-rate in Dublin averaged 18·3 per 1000; the mean rate during the same period did not exceed 10·8 in London and 11·4 in Edinburgh. The 130 deaths of Dublin residents registered during the week under notice showed a further decline of nine from the numbers returned in the two preceding weeks, and included 17 which were referred to the principal epidemic diseases, against 12 and 14 in the two preceding weeks. These 17 deaths were equal to an annual rate of 2·2 per 1000, the rate during the week from the same diseases being 1·2 in London and 0·7 in Edinburgh. Of the 17 deaths from these epidemic diseases in Dublin, nine resulted from diarrhœa, five from measles, two from diphtheria, and one from scarlet fever, but not any from small-pox, from whooping-cough, or from "fever." The fatal cases of diarrhœa corresponded with the number returned in the previous week, while the deaths from measles showed an increase. The 130 deaths from all causes during the week included 29 of children under one year of age and 29 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons were fewer than the respective numbers in the two preceding weeks. Four inquest cases and three deaths from violence were registered, and 54, or 41·5 per cent., of the deaths occurred in public institutions. The causes of five, or 3·8 per cent., of the deaths registered during the week were uncertified; the causes of all but one of the 1034 deaths registered in London last week were duly certified, while in Edinburgh the proportion of uncertified causes was equal to 2·9 per cent.

AT its meeting held last week the Keynsham (Somerset) rural district council unanimously decided to increase the remuneration of its medical officer of health (Mr. J. C. Heaven) by £15 per annum.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

IN accordance with the provisions of Her late Majesty's Order in Council of April 1st, 1881, Fleet Surgeon Johnston Hamilton Acheson, M.B., has been placed on the Retired List at his own request (dated July 22nd, 1908).

The following appointments are notified:—Fleet Surgeons: H. Holyoake to the *Ariadne;* and W. J. Bearblock to the *Gibraltar*, for charge on the voyage home. Staff Surgeons: M. J. Smith to the *Challenger*, on recommissioning; and R. D. Jameson to the *Hecla*. Surgeons: W. N. L. Cherry to the *Challenger*, on recommissioning; G. Ross to the *Prometheus*, additional, and on recommissioning.

ROYAL ARMY MEDICAL CORPS.

Lieutenant Thomas F. Lumb resigns his commission (dated July 29th, 1908).

Surgeon-General W. L. Gubbins, C.B., M.V.O., has been appointed Deputy Director-General, Army Medical Service, at headquarters. Major G. T. K. Maurice has been appointed special health officer at Muttra. Lieutenant-Colonel W. G. Birrell has been appointed Senior Medical Officer, Mauritius, vice Colonel A. Peterkin. Captain G. G. Delap has been appointed Assistant Instructor, Royal Army Medical Corps School of Instruction at Aldershot, vice Captain H. C. R. Hime.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Major Henry C. Lamport to be Surgeon-Lieutenant-Colonel (dated July 13th, 1908). Surgeon-Lieutenant Hubert R. R. Fowler to be Surgeon-Captain (dated July 14th, 1908).

TERRITORIAL FORCE.

Royal Army Medical Corps.

A report to the Secretary of State for War has been made by the Director-General of the Army Medical Service, Surgeon-General Sir Alfred Keogh, dealing with the progress made in constituting the Medical Service of the Territorial Force. Premising that there is a demand for organisation in time of peace, so that the profession shall be ready in time of war to accept the responsibilities thrown upon it, the Director-General points out that the organisation of the Royal Army Medical Corps (Territorial Force) must be founded on the following principles: (1) As far as possible it is organised on lines exactly similar to that of the Royal Army Medical Corps; (2) those medical men who are willing to join the service, such as teachers in universities and medical schools, or are already engaged in important public work are not called upon to undertake responsibilities different from those undertaken by them in active practice in civil life .....; (3) duties are allocated in war similar to those which the members of the medical service of the Territorial Force are performing in time of peace but at the same time provision is made for coördinating the work of the several branches of the profession, so that although there is a differentiation of duties the component parts are held together and are not regarded as separate and distinct. The details of the organisation founded upon these principles are then discussed and the document closes by drawing "special attention to the aid which I have received from these most patriotic men, the whole body of the medical profession."

MENTIONED IN DESPATCHES.

The name of Major O. R. A. Julian, C.M.G., R.A.M.C., is mentioned in the despatches relating to the Mohmand Expedition which have been published in India. The total casualties in action during the expedition sustained by the force amounted to 52 killed (or died from wounds) and 205 wounded of all ranks. The enemy is estimated to have lost about 450 killed.

THE DEVONPORT COMMAND.

On July 23rd the Director-General of the Medical Department of the Navy (Inspector-General James Porter, C.B.) commenced his visits to medical establishments in the Devonport Command. The Royal Naval Hospital, Stonehouse, was first inspected and here the Director-General was received by Inspector-General H. T. Cox, Deputy Inspector-General J. J. Dennis, Deputy Inspector-General

F. J. Lilly, and the staff of the hospital. The Director-General later received the medical officers from ships and establishments in the port and also visited stores and workshops. On July 24th the Director-General visited the sick quarters at the Royal Naval Barracks, Keyham, the surgeries at the North and South Dockyards, and the Royal Marine Infirmary at Stonehouse.

THE OSBORNE CONVALESCENT HOME.

The report for the year ending March, 1908, by the house governor and medical superintendent, Lieutenant-Colonel C. R. Kilkelly, C.M.G., late Grenadier Guards, of the Osborne Convalescent Home for officers of the navy and army has been issued as a Parliamentary paper. The admissions of officers show a marked diminution of Malta fever cases from the Mediterranean station and fewer admissions of naval officers. The largest number of officers admitted (65·5 per cent.) belonged to the home army, and nearly half the total number of admissions (44 per cent.) were for diseases contracted in India. In conclusion, the house governor draws attention to the great benefit which has been derived from the monthly visits of members of the consulting staff.

Correspondence.

"Audi alteram partem."

UNWHOLESOME MEAT IN RURAL DISTRICTS.

To the Editor of THE LANCET.

SIR,—With regard to your annotation in THE LANCET of July 11th, p. 108, under the above heading, and your further note in your issue of July 18th, p. 207, entitled "How Diseased Meat reaches the Towns," we in Sussex are well aware of what is going on with regard to the trade in diseased animals and diseased meat, and however keen we may be while the present law with regard to the seizure of diseased animals is not amended we are powerless to act. For instance, in the case of the prosecution of the farmer Middleton and Neary the butcher, both of Ditchling. These men were convicted and fined at Brighton for exposing for sale portions of an ewe which were unsound and unfit for the food of man. It is also a fact that Neary bought this ewe at Hassocks Market for 1*s*. Hassocks Market is within the jurisdiction of the Cuckfield rural district council. It is stated in your article that in the second instance the fault lay with the sanitary authorities for allowing the sale of such an animal. Where is the fault? There was no proof that the animal was intended for the food of man. The market is for the sale of all classes of animals, not only fat beasts. In the present state of the law it was impossible to seize this animal while alive. The sanitary inspector has obtained the meat inspector's certificate of the Royal Sanitary Institute and visits this particular market to keep observation on such cases as mentioned by you. Hassocks Market is a private auction sale market and is not owned by the rural sanitary authority. The veterinary inspector appointed by the local authority under the Diseases of Animals Act, 1894, or any Orders declared to be in force under such Act, only inspects animals that may be suffering from such diseases as foot and mouth disease, pleuro-pneumonia, cattle plague, swine fever, &c.

You are aware that Section 116 of the Public Health Act, 1875, deals with the power of inspection of, and seizure of, diseased, unsound, unwholesome, or unfit animals or carcasses, or meat *exposed for sale or deposited in any place for the purpose of sale or of preparation for sale and intended for the food of man, the proof that the same was not exposed or deposited for any such purpose or was not intended for the food of man resting with the party charged.* I am aware animal includes live and dead animals if exposed for sale or deposited in any place for the purpose of sale or of preparation for sale *and* intended for the food of man.

The difficulty of taking action under this section arises in the words exposed for sale and intended for the food of man. Dealers in diseased animals and bad meat always have a plausible story with plenty of witnesses for the magistrates to listen to, with the result that the Bench often dismisses the case or the defendant gives notice of appeal.

In a similar case a few months since the sanitary inspector and myself had what we considered a good case. The dealer appeared in court with many witnesses, a good lawyer, and our case was dismissed. The dealer then took an action in the High Court against us for damages but the case was settled by the sanitary authority paying costs, including a sum of money.

You will admit that this is not satisfactory and not encouraging to any sanitary authority to take action against this class of purveyors in diseased animals and bad meat, however energetic they may wish to be. Instead of blaming the sanitary authorities for not doing that which is impossible, would you use your influence to obtain an amendment to the Public Health Act to the effect that when an animal is exposed for sale at a market or auction sale that if such animal is suspected to be diseased or found to be diseased that such animal shall be seized and slaughtered and examined by the meat inspector and if found to be diseased shall be destroyed, but if found healthy shall be passed for food of man? The fact of the animal being entered for sale at the market should be considered to be evidence that the animal was intended to be used for food of man.

In case the animal should be allowed to pass alive from the market, although known to be diseased, the name and address of the owner should be taken and information given to the sanitary authority of any change of ownership from time to time. Sanitary authorities should be compelled to appoint qualified inspectors to attend the markets in their districts.

I am, Sir, yours faithfully,

School Hill, Lewes, Sussex, July 21st, 1908. HUGH STOTT.

THE TECHNIQUE OF OPSONIC ESTIMATION.

To the Editor of THE LANCET.

SIR,—In an interesting letter to THE LANCET of July 18th, p. 185, Dr. F. G. Bushnell and Dr. A. G. Troup, under the above heading, draw attention to a simple method of estimating the opsonic index that should be welcome to any worker who has used Wright's more laborious method, which, moreover, treats the leucocytes as indifferent. The improvement lies not only in the simplification and in the procedure of dilution (a valuable addition), but also in the recognition and use of the fact that the phagocytic power of the leucocytes varies. Practically the "hæmophagocytic" index of Shattock and Dudgeon should be more useful to us as a guide to treatment than the opsonic content of the serum and is at the same time easier to estimate.

In the *British Medical Journal* of Oct. 12th, 1907, p. 948, I suggested a modification of the method of estimating the opsonic index. Dealing mostly with normal blood, even with two specimens from the same person, and adopting substantially the methods used by Dr. Bushnell and Dr. Troup I found that the number of bacilli "phagocyted" varied inversely with the number of leucocytes present in the capillary pipette in which the mixture was incubated; from this fact it was easy to derive a formula for correction of the results. Mr. A. Fleming (*Practitioner*, May, 1908) confirms this inverse ratio, though only in a general way. In taking up blood for opsonic estimation it is convenient to use pressure which will vary the number of leucocytes per volume; that is, the actual number of the patient's leucocytes may not be present in the mixture incubated; as a matter of experiment the numbers may vary enormously; but as they easily may be estimated direct from the incubated pipette very little extra trouble is involved in utilising the simple method of estimation under discussion.

I am, Sir, yours faithfully,

H. B. DODDS, M.D. Edin.

Royal National Sanatorium, Bournemouth, July 21st, 1908.

REINFORCEMENT OF THE VIRUS OF CHICKEN-POX.

To the Editor of THE LANCET.

SIR,—I have only just read the letter of Dr. E. F. Travers in THE LANCET of June 6th last, in which he gives an account of a very interesting case in which a patient suffering from the joint effects of recent influenza and acute toxæmic jaundice incurred also an attack of chicken-pox of an unusually severe type. Dr. Travers draws attention to the case as illustrating the possibility of the conveyance of the infection

of chicken-pox by intermediate parties and undoubtedly it is interesting from this point of view. But I venture to think that its interest is much greater as illustrating a point which Dr. Travers does not appear to notice, and this is the effect of an existing septic condition of the blood in predisposing to and energising the virulence of an infection which, under ordinary conditions, is of such trifling importance as chicken-pox is, thus leading to all the dangers of mixed infection. I am, Sir, yours faithfully,

Gloucester, July 28th, 1908. FRANCIS T. BOND, M.D. Lond.

A FISH BONE REMOVED WITH THE STOMACH TUBE.

To the Editor of THE LANCET.

SIR,—The following case may interest your readers. The patient, an intelligent man, consulted me complaining of having swallowed a fish bone about an inch in length; he had induced vomiting, which had only made his "swallow" more painful. Taking for granted that the bone had a hook at its free end, it occurred to me that if I was able to hitch the short hook of the bone in the lateral opening at the end of a "stomach" tube I should have no difficulty in withdrawing the bone from the mucous membrane of the œsophagus in which it was imbedded. Having passed the tube about 12 inches, rotating it in the œsophagus, alternately pushing it in and withdrawing it, I was quite soon rewarded by finding the short hook caught in the lateral opening of my tube—much to the delight and wonderment of my patient.—I am, Sir, yours faithfully,

FRANK KENNEDY CAHILL, F.R.C.S. Irel., D.P.H., &c.

Dublin, July 24th, 1908.

ESPERANTO AT INTERNATIONAL MEDICAL CONGRESSES.

To the Editor of THE LANCET.

SIR,—Could the promoters of the next International Medical Congress to be held in Budapest be induced to add Esperanto to the international languages allowed at the Congress? It is easy to learn. Many medical men in all lands already know it. There is an Esperanto centre in Budapest. I am, Sir, yours faithfully,

A. S. MORTON, M.D. Durh.

P.S.—We might possibly prevail upon you to leave a column blank in your journal for the special use of recent Esperanto communications from every land.

Mexfield-road, Putney, S.W., July 24th, 1908.

THE RECENT ELECTION TO THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

To the Editor of THE LANCET.

SIR,—Your comments on the election at the Royal College of Surgeons of England are extremely interesting. We are all, of course, interested in this survival from former times. If you look at the figures the fact appears that only one obtained a majority of votes. The votes *needed* for election were only 331, or about two-fifths. Those fortunate Fellows who were elected represent, as regards three out of four, a minority. The point uncertain is whether they all represent the same minority or different minorities. In this mode of election, which is called the *block method*, generally the actual—not always the real—majority elects the whole number. That the provincial Fellows have placed their candidate is due to the majority not being a compact one and that Fellows did not use all their votes. Of 856 voters 160, or a fifth, voted once and the others on an average for three candidates, showing that probably a good many voted for two only. All that can be said is that Mr. Gould and Mr. Lane each represent about half the College. It was a mere chance which of the next four should be elected. For instance, if Mr. Lane's 72 plumpers had voted also for any one of these it would have decided his election. The only real way to get the true representation of parties, or groups, or minorities, is to allow only the single vote: one man one vote. It is *not necessary* to have an alternate transferable vote, but a second vote alternative might be allowed. In such case (there being, as above, 856 electors) with the single vote 172 would suffice to elect anyone, but if the popular candidate had 272 votes then after the sufficient number of voting papers had been allotted to him all the remaining 100 would be distributed according to the alternative vote.

The present system is too antiquated, at least if reasonably accurate representation be wanted, and not a sort of a game of cricket where you want your side to triumph.

I am, Sir, yours faithfully,

Kensington, W., July 22nd, 1908. GEORGE CRICHTON.

A LURID STORY.

To the Editor of THE LANCET.

SIR,—Will you please be good enough to allow me to reply to the letter you published in THE LANCET of July 18th to which you supply the title "A Lurid Story." I am the superintendent of that nursing home. I most heartily agree with the writer's views as to the urgent need for "a proper system of nurses' registration." No one knows better than "A Trained Nurse" the terrible disadvantages we have to work under in private nursing. Although not at all in favour of the "militant" suffragette, I am looking forward hopefully to the present Government giving us our legal rights, and then we shall expect women's questions—of which State registration for nurses is, in my opinion, most pressing—to get their share of attention and legislation. All nursing homes and institutions should be open for inspection and I should be pleased to show any member of the profession over my small home at any time. Reading "F.R.C.P.'s" letter I at once saw the nurse had suppressed the fact that she had received some previous training. She had been a "paying probationer" for a year in one of our largest London hospitals and also for three years in a large surgical home in the North of England, where she was given a three years' certificate. I saw a copy of this, as also of two good testimonials, before admitting her to my staff. I was very busy at the time, so did not take her references up personally. That will not occur again. I have seen the matron of the hospital where this sad occurrence took place and must express my sorrow that through any reference of mine—though absolutely accurate so far as I knew—the hospital should have had so much trouble and anxiety. Of course, I had not the least idea of lack of mental balance on the nurse's part, or for her own as well as our profession's sake I should have refused to recommend her for nursing.

I substantiate all the facts given as not being at all overstated, but my conscience acquits me of disloyalty to my profession and to the public when I knew that nurse had four years of some sort of training (although the matron will not allow that such training is worth anything). I have never sent the nurse in question to an outside case without the doctor being told that she was only partially trained. In justice to the nurse I must say that in the two private cases she took for me she received excellent reports.

I am, Sir, yours faithfully,

July 21st, 1908. A TRAINED NURSE.

THE MEDICAL EDUCATION OF WOMEN IN EDINBURGH.

To the Editor of THE LANCET.

SIR,—Regarding the announcement of the public "conference" *re* medical education of women in Edinburgh, may I, as a recent graduate of this University, point out the inaccuracy of the statements by your correspondent on July 18th. The object of the present agitation is *not* to force the University to admit women students to its classes in order that they may "rub shoulders with the men" in systematic and clinical work as stated. The aim is to insure adequate teaching sufficient for their requirements as practitioners later. The following points are erroneous: 1. Your correspondent asserts that the opposition to University classes being opened to women is based on the fact that such would entail mixing of the sexes—a point we neither aim at nor wish for in itself. Under the present system of education of women in the extra-mural school a

large number of the classes are mixed—e.g., physiology, materia medica, insanity, children's diseases, and others. It may minister to the sentimentality and pruriency of those who regard the less ideal side of medicine to fancy that women are not admitted to mixed classes. That they are is a working fact. 2. All the extra-mural school and certain members of the University court and professors are not opposed to opening University classes to women. 3. The women are not endeavouring to "rub shoulders with the men" in the infirmary wards, which wards are permanently set apart for their use, and the advantages of their less crowded clinical work are too obvious to be lightly foregone.

The wish expressed for our "housing" and "elegant classrooms" is our own. Unfortunately, means and locality are lacking. The scheme recently laid before the University suggested that scientific subjects up to the second professional and including physiology should be taught to women by the University, the daily expansion of these subjects necessitating this as regards the less adequate means of the extra-mural school. In addition it was proposed that third professional and final subjects be continued as heretofore as arranged by the Scottish Association. Considering that physics, physiology, and materia medica are mixed extra-mural classes now the proposal seems moderate. In avoiding lacerating the feelings of the University it was suggested that a separate dissecting-room under the professor's control be erected, the Carnegie Trust agreeing to assist in the monetary line were the scheme accepted. It was refused.

In concluding, may I add that I could wish for opportunity to set forth at greater length the difficulties of the present situation. Personally I have met with extreme kindness from all my teachers of the extra-mural school, and, like other women students, am not amongst those who wish to aim at peer association with the male side of the University. Most of us have ideals for medicine and its application which do not allow of limitation to sex and place. These ideals can be worked out only under proper tuition. We would prefer that this tuition were, if possible, independent of mixed classes—which in itself is a minor point regarding the greater issues. But our work comes first and if it entails this such University classes should at least be optional. In science and medicine in particular no sex should be recognised; we should stand as one in the conflict with disease and sin, regarding our prerogative as a divine trust. It will be only when each sex comes to realise its mutual responsibility and coöperation in these things that we can hope to solve the burning problems of medical and social work which face us—that we shall reach on to the more disinterested labour, the more generous fellowship, the truer relationships, more systematised ideal, the purer faith, the larger hope.

I am, Sir, yours faithfully,

July 24th, 1908. GRADATIM.

THE FRANCO-BRITISH EXHIBITION.

(FROM A SPECIAL CORRESPONDENT.)

A FEW exhibits of particular medical interest remain for notice. On arriving at the end of the long range of halls, the exhibits of which were partly described in a former article,[1] the main portion of the exhibition is reached. The first hall in this part which contains anything of special interest to medical visitors is that in which are shown scientific instruments and apparatus, including exhibits by the National Physical Laboratory and the South Kensington Astrophysical Laboratory. The exhibit best calculated to hold the attention of the medical man is perhaps that which shows the method of treating acute cases of caisson disease or compressed air illness. This affection, to which workers underground in high pressure air are not infrequently subject, is far more common in America than in this country, owing to the larger amount of bridge-building and of other work necessitating the use of caissons, and the method for treating the disease under review is the invention of an American. In 1890 when a tunnel under the Hudson river at New York was in course of construction Mr. E. W. Moir caused to be made a metal chamber or "lock" in which the air pressure could be raised or lowered in accordance with the medical attendant's instruction, the object being to treat victims of the disease on the principle of recompression, the air pressure in the "lock" being raised to the same degree as that to which the patient has been exposed and very gradually lowered, fresh air being admitted in the meantime. Mr. Moir's "lock," a large and excellent model of which is shown, is divided into two compartments to allow the medical attendant to enter or to leave the "lock" without the necessity for changing the air pressure of the inner compartment which is occupied by the patient. Provision is made for artificially warming the "lock." It may be mentioned that during the construction of the Baker Street and Waterloo Railway in London, when a considerable amount of tunnelling was done by means of caissons, Dr. F. W. Wainwright, the medical attendant of the workers, improvised an air lock which is described in THE LANCET, Dec. 22nd, 1900, p. 1792.

Passing into the grounds and entering the Palace of Decorative Arts we find a varied collection of furniture, both useful and artistic. Here are shown fire-grates for which certain hygienic and economical advantages are claimed. The most distinctive from the standpoint of novelty is a heat distributor invented and exhibited by Mr. James D. Prior of Birmingham. This consists of oblong corrugated copper tubes containing water, which are fastened at the back of a fire-grate in general use and connected with hot water pipes or radiators fixed in the rooms to be heated. It is stated that the distributor extracts sufficient heat from the back of the fire to cause a rapid circulation of water through the pipes or radiators. It is claimed that three rooms may be thus warmed by the utilisation of the heat which might otherwise be wasted of one fireplace. From a practical demonstration of the working of the method on a small scale it appears to be an effective device, but, of course, no one could pass a decided opinion on its merits without having the opportunity of testing it in a house for a lengthened period. There certainly is ample room for improvement in our present methods of heating houses from the points of view of efficiency and economy, and devices which tend in this direction are at least worthy of notice. In this country there appears to be a prejudice against heating houses by means of hot water, and, of course, in many instances the system is not applicable. Nevertheless, it possesses many obvious advantages over the open grate, especially over the open grate in which is burned soft coal. It is unfortunate, too, that while such a fireplace is the heating apparatus almost universally in use in English houses it is an appliance which does not nearly consume all its fuel, and consequently is a constant spreader of "dirt" in the room which it heats, besides adding its quota to the contamination of the outside atmosphere by particles of carbon. Although grates can be obtained which burn well, throw out a large amount of heat and consume a very large proportion of their fuel, yet it is often difficult to kindle fires in such slow combustion grates. The "Bell" Range and Foundry Co., London, have on exhibition a grate, the chief feature of which is that the fire-brick is of large size, covering or overlapping the fire, and is also of exceptional thickness, so that, being a non-conductor, it absorbs and retains a large amount of heat. The combustion is slow as there is little upward draught owing to the position of the front platform which shields the fire; consequently it is claimed that all the fuel in the grate is consumed. From a necessarily somewhat cursory inspection of this grate it seemed to justify to a great extent its claim to be an economical, healthful, and good heat-giving apparatus.

The milk question and all pertaining to it bulk very large in the estimation of medical men and of the general public to a lesser extent at the present time, and any devices brought forward with the view of insuring a fairly clean milk-supply are certain to attract attention. It is somewhat curious that, considering the facilities afforded to manufacturers of dairy machinery and appliances employed in the milk trade by the exhibition for displaying their goods, the display of dairy appliances is confined to one firm. Messrs. Burmeister and Wain, Limited, London and Dublin, makers of dairy machinery, exhibit in the British Machinery Hall a self-balancing hand separator constructed on the principle of a spinning-top and almost noiseless. A really self-balancing hand separator possesses

[1] THE LANCET, July 18th, p. 190.

many points of superiority, and if that shown by Messrs. Burmeister and Wain in its working reaches the degree of excellence claimed for it a serious objection to hand separators will have been removed. There are also shown specimens of railway cans with rain- and dust-proof lids.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Queen's Hospital.

THE extensions at the Queen's Hospital are in an advanced stage of completion and it is probable that the new buildings will be formally opened in October next. A slight alteration of the original plan has been made, and at the suggestion of Dr. A. Foxwell a portion of the upper part of the block which was to have been roofed in the usual way is to be provided with a flat roof and is to be used as an open-air ward. In the first instance, the flat roof area will only accommodate six beds, but if the results obtained prove satisfactory the roof ward will be extended. The total cost of the extensions will be about £40,000. Of this £25,000 have been paid or promised and the sum of £15,000 is still required. That this will be obtained there can be little doubt, for Alderman Clayton, who has already given so liberally and worked so energetically for the hospital, is acting as treasurer of the improvement committee and his capable energy will certainly secure the necessary funds. The new buildings were absolutely needed. They have been admirably planned and they will greatly facilitate the work of the hospital.

The Birmingham and Midland Eye Hospital.

At the annual meeting of the governors of the Birmingham and Midland Eye Hospital the medical board reported that the work at the institution had increased considerably; 3691 more patients had applied for treatment and 171 more in-patients had been admitted than in the previous year, but in spite of increased admissions 50 patients were still waiting to be taken in and in the present circumstances it was impossible to cope with all the operation cases without considerable delay. During the year 784 operations had been performed upon in-patients, including 378 for cataract, and of the latter only five cases were unsuccessful. In the out-patient department there were 28,080 cases, an increase of 3520 as compared with the previous year, and in this department 666 operations were performed. The general committee reported that it had secured some adjoining premises for the purposes of providing more suitable accommodation for nurses and servants and for general extension. The initial cost of the new premises was £6500 and it was estimated that to meet the additional expenses which would arise in association with the new acquisition an additional annual income of £800 would be required. During the past year the total expenses of the institution, exclusive of the £6500 for extensions, were £7826 and the ordinary income amounted to £7189.

The Birmingham Lunatic Asylums.

The annual statements of the medical superintendents upon the Birmingham lunatic asylums contain much interesting and significant information. At Winson Green the admissions during the past year have been slightly in excess of the average during the preceding years, but Dr. E. B. Whitcombe does not think the difference is sufficient to cause any anxiety about the increase of insanity. The recovery-rate has been slightly below the average and the death-rate about the same as usual. Dr. Whitcombe points out that the death-rate is increased because several patients were sent in who were merely exhibiting the delirium of physical disease other than brain disease and they died as a result of the disease from which they were suffering. In his opinion such patients ought not to be sent to asylums for the insane, not so much for their own sakes as for the sakes of their families who are thus branded with the stigma of insanity, and he believes the cost of treating them elsewhere would be less than the cost of sending them to an asylum. One statement in his report should emphasise to the public the cost of insanity; he draws attention to the fact that 35 patients have been in the asylum over 20 years, 18 between 20 and 30 years, 14 between 30 and 40 years, and three over 40 years, and that the cost of maintenance of these patients has been over £30,000. Amongst the causes of the insanity of the patients who have been under treatment heredity and alcoholic excess stand out prominently and Dr. Whitcombe expresses his belief that as regards the latter no legislation short of compulsory detention and the prevention of propagation will have any beneficial effect.

The Deaf and Dumb Institution.

At the recent annual meeting of the friends and supporters of the Deaf and Dumb Institution Sir Walter Fisher, in seconding the adoption of the report, pointed out that 20 years ago the committee spent £2700 and last year the expenditure amounted to £7615, the difference being a very definite indication of increasing work. During the same period also £25,000 have been spent upon structural alterations and improvements. During the past year the expenditure exceeded the ordinary income by a little over £500 and the deficiency had to be transferred to the legacies and special donations account, but, as the Lord Mayor suggested, such a variable source of income cannot be depended upon and those who are interested in the deaf and dumb will no doubt make attempts to get the subscription list increased so that the utility of the institution may at least be maintained if not increased.

The Health of Birmingham.

The recently issued annual report of the medical officer of health is distinctly pleasant reading, since it indicates a continued improvement in the health of the city and a steady diminution both of general and infantile mortality. Dr. J. Robertson estimates the general death-rate for 1907 as 16·1 per 1000, the average for the past three years being 16·3. The infantile mortality rate, 147 per 1000, shows still greater improvement, for in 1906, when epidemic diarrhœa was prevalent, it reached 166 per 1000 and in 1905 it was 155 per 1000. It is almost unnecessary to say that Dr. Robertson thinks the present rate far too high. The difficulty is to combat the circumstances to which the high rate is due, a difficulty which is increased by the fact that there is no one preponderant cause in the absence of epidemics; insufficiency of sustenance due to various circumstances, absence of proper cleanliness, and ignorance regarding the proper method of rearing all contribute. Speaking generally, it may be said that ignorance and carelessness underlie and constitute the bases of the circumstances which lead to the high infantile mortality rate and both are factors which it is difficult to oppose. Enteric fever and tuberculosis are both apparently becoming less potent causes of death, and the former would constitute but a slight source of danger under present conditions were it not that much contaminated shellfish is consumed. The scarlet fever epidemic which held so long a sway and fortunately was of so mild a type was tantalising, more particularly because it could be traced to no very definite source. The record of the past year having proved so favourable we may look forward hopefully to an even better result for the year which is now running.

July 28th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Vacancy on the Honorary Staff at the Liverpool Royal Infirmary.

A VACANCY has occurred on the senior honorary staff of the Royal Infirmary owing to the resignation of the post of honorary surgeon by Mr. George Gibson Hamilton who is leaving Liverpool to reside in Bournemouth. There will be no contest on this occasion, as by the general consent and approbation of the profession in Liverpool Mr. William Thelwall Thomas, surgeon to the out-patients at the Royal Infirmary, will be elected without opposition. Mr. Thomas is the associate professor of surgery and lecturer on operative surgery at the University of Liverpool, and was appointed assistant surgeon to the Royal Infirmary in 1892, subsequently becoming surgeon to the out-patients. The promotion of Mr. Thomas will be hailed with great satisfaction by his professional brethren in Liverpool, owing to his high professional attainments and geniality of temperament.

Opening of the New Extension of the Home for Epileptics at Maghull.

A large gathering of ladies and gentlemen who are interested in the treatment of epilepsy were present on

July 25th at the nineteenth annual meeting in connexion with the Home for Epileptics, which was held at the institution, Maghull, and also at the opening of the new "Chilton home" erected on the estate for the accommodation of children. The new home was formally declared open by the Lord Mayor (Dr. Richard Caton) in a eulogistic speech. He said that he thought it was most appropriate that the buildings should bear the name of Miss Chilton who was till quite recently the matron there and who had done such a splendid work and had been such a generous and liberal donor to the institution. He was sure the new home would be of enormous benefit to a vast number of children to come. The buildings have been designed to accommodate 30 boys and 30 girls, the maximum number allowed by the Board of Education, and they form two separate buildings under one roof. The planning throughout is simple, facilitating the easy supervision and administration of the building. The two entrance halls give access to the main corridor, from which nearly all the rooms on the ground floor are approached. The dormitories are situated at each end of the building, two rooms, each accommodating 15 children, being separated by the nurses' duty room, with an inspection window in each side giving supervision over both bedrooms. The staircases, placed in the entrance halls, are well shut off from the children's quarters and are constructed of fireproof materials.

July 28th.

NEWCASTLE-UPON-TYNE.

(FROM OUR OWN CORRESPONDENT.)

University of Durham Bill, 1908.

THE University of Durham Bill was passed through the Standing Committee on July 20th. Some minor drafting amendments had been introduced in Committee on the initiative of Mr. J. W. Hills, the Conservative member for Durham City, who has charge of the Bill. The Bill was reported to the House and passed the third reading on Friday.

Summer Examinations in the Faculty of Medicine.

A convocation of the University of Durham was held in the Castle Hall, Durham, on July 25th, for the purpose of conferring degrees in medicine, &c., following the examinations which have been held in the Faculty of Medicine during the last fortnight of the summer session. The entries for the various examinations were good and the results have been quite up to the average, judging by the percentage of candidates who have satisfied the examiners. There has been some criticism on the part of a proportion of the students of the College of the action of the council in altering the dates of the examinations which were formerly held in April and September. The critics of the present arrangement hold that the alteration works unfairly with students who fail to pass their examinations in July, because they now have to wait eight months before they can again present themselves for examination. But a little thought must surely show that this is quite a minor disadvantage affecting but a small minority of the students. The advantages gained under the present arrangement are so obvious and affect such a large majority that the adverse criticism is really without weight. By holding the examinations in March and July, immediately on the conclusion of the winter and summer sessions, the vacations are left free for recreation, which is not only desirable but essential. The amount of work called for from the student of medicine to-day is so great and the training so long and arduous that unless provision is made for a suitable vacation and advantage taken of it by those for whom it is provided the student is exceedingly likely to find that towards the end of his undergraduate career he is worn out and his interest in his life's work largely diminished if not lost. One's work can only be good if one's interest is keen, and for keenness one must be bodily "fit." The vacations are arranged not for cramming in one's rooms but for healthy outdoor recreation.

Education (Provision of Meals) Act, 1906.

The Newcastle corporation, on the advice of its education committee, adopted the Provision of Meals Act, which it put in force between January and March of this year. The work was undertaken as the result of reports received from head teachers in October, 1907. Lists of necessitous children were then sent in and these were handed to the Charity Organisation Society in February for investigation. The report of this society states that 1480 families, including 5180 children under 14 years of age, were dealt with. It was found that in no less than 528 instances (i.e., over 35 per cent.) the incomes of the parents were sufficient for their needs. Of these 528 families, 160 are classed as withdrawn, and in most of these 160 cases the report states that "the parents showed a spirit of independence and expressed their objection to their children being fed at school; but, on the other hand, there were several flagrant cases of imposition in which the actual income proved to be double and treble that stated." Intemperance and want of thrift were found to be more frequent causes of distress than any other. The education subcommittee criticises the report of the Charity Organisation Society. It points out that "the feeding of children was undertaken in January quite as an experiment. All experiments are more or less for the purpose of gaining experience and for affording opportunities for ascertaining the best methods of dealing with the business in hand and of learning the dangers to be avoided." Such an expression of opinion of the purpose for which experiments are carried out does not enhance one's opinion of the value of the subcommittee's criticisms. The subcommittee also points to "one fact which must not be overlooked. It is well known that one of the fundamental principles of the Charity Organisation Society is to educate thriftless and indifferent parents to better efforts in respect of themselves and their children. A most laudable object and one with which the committee has every sympathy. The committee would, however, again emphasise that the aim of the Provision of Meals Act is that the feeding of children should primarily be of an educational character, so as to enable them to profit by the instruction given in the elementary schools." One would rather emphasise the fact that the corporation should not overlook the duty of parents to their children and urge that it should act on the principle with which its committee has "every sympathy" rather than on its present principle of pauperising the community. The subcommittee has resolved to recommend that the feeding of school children should be resumed in the first school week in October next. It is to be hoped that the lists of necessitous children, revised with the aid of the results of last winter's "experiment," will not include 35 per cent. of cases where the incomes are sufficient for the needs.

July 27th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Infantile Mortality in the Rhondda Valleys.

THE number of deaths among young children in the Rhondda Valleys has always been large. In the ten years ending 1906 the average annual infantile mortality-rate was 195 per 1000 births, and during the same period the average annual rate in England and Wales was 145 per 1000. In 1907 the rate was 162 per 1000 births in the Rhondda, a rate only exceeded in three of the 72 large towns—Wigan with 163, Merthyr Tydvil with 164, and Nottingham with 165 per 1000. Nearly one-third of the illegitimate children born in the Rhondda died before they reached the end of the first year of their lives, so that the infantile mortality-rate among children born in wedlock was only 158 per 1000 births. More than one-third of the 767 deaths under one year occurred before the children were one month old. When commenting upon this disastrous loss of infant life the medical officer of health, Dr. J. D. Jenkins, points out in his annual report that while elsewhere the causes of a high rate of infantile mortality include poverty leading to want of nourishment and female labour leading to exhaustion and physical ill-health, in the Rhondda the vast majority of women are, or need not be other than, favourably circumstanced, for the men do all the wage-earning in the district, where work is plentiful and wages are relatively good and the women are at liberty to look after their homes as well as the personal interests of themselves and families. The reduction of this high infantile mortality is apparently one of the most serious problems which the Rhondda urban district council has to face, and it will be well advised if it gives effect to the advice of its medical officer of health and appoints one or

more women health visitors whose services would be almost incalculable in a district of this kind.

West Wales Sanatorium.

The sanatorium for consumptives which was opened by H.R.H. Princess Christian on July 21st near Lampeter is the only institution of its kind in South Wales. The scheme for its establishment was initiated about seven years ago shortly after the meeting of the British Congress on Tuberculosis in London in 1901. It is intended to serve the three counties of Cardigan, Pembroke, and Carmarthen, and the delay in the completion of the buildings has largely been due to a desire to open the institution free from debt and with a portion of the income assured that will be required in the future. It is pleasing to be able to record that this has been achieved. The site of the buildings is on the side of a mountain about 850 feet above sea level and some 14 acres are available for the purposes of the institution. The main block, which has a south-easterly aspect, is of two storeys and has accommodation for 20 patients, nearly all of whom have separate bedrooms. It is intended to erect two additional wings for eight paying patients. The administrative block is a separate building. The total cost of the buildings has been nearly £8000, a sum equal to £400 per patient, but this amount will be very considerably reduced upon the completion of the proposed additions.

Colliery Surgeons in the Rhondda Valleys.

Disputes between the workmen in the Rhondda Valleys and the colliery surgeons are of very rare occurrence. They have as a rule been satisfactorily adjusted and one which is now taking place at the Cymmer Collieries near Porth will no doubt be no exception. Dr. C. E. Cochrane, who has been surgeon to these and other collieries for some six years, has been asked by the workmen to agree that in appointing and dismissing his assistants he shall confer with, and be guided by, the workmen's committee which shall also consider applications for assistantships. Dr. Cochrane very properly objects to this joint control which, if adopted, can hardly be to the advantage of the men themselves. When the difficulties of the proposal are put before them in a proper light and in a reasonable manner they will no doubt agree that it is an unreasonable one.

July 28th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal College of Physicians of Edinburgh.

A QUARTERLY meeting of the Royal College of Physicians of Edinburgh was held on July 21st, Dr. John Playfair, the President, being in the chair. On a ballot the following candidates were admitted to the Fellowship of the College:—William Elliot Carnegie Dickson, M.D. Edin., Edinburgh; and Charles John Shaw, M.D., Ch.B. Edin., Glasgow. Charles Macfie Campbell, M.B., Ch.B. Edin., Edinburgh, and Thomas Bogie Hamilton, M.B., Ch.B. Edin., Cairo, Egypt, were admitted by ballot to the Membership of the College after examination. The registrar reported that since the last quarterly meeting of the College 14 persons had obtained the licence of the College by examination. The regulations regarding the single licence and Membership and Fellowship of the College for the ensuing year were approved. The secretary intimated that Dr. W. Allan Jamieson had been appointed as a representative of the College on the governing board of the School of Medicine.

Graduation Ceremonial at the University of Edinburgh.

The July graduation ceremonial at the University of Edinburgh, which is the principal medical gathering of the year, was held on July 24th. The McEwan Hall looks its best on this occasion, for it is largely occupied by the lady friends of those who are to be "capped." Sir William Turner, K.C.B., presided in his capacity as Vice-Chancellor. There were no honorary degrees conferred at this time. 74 graduates took the higher degree of M.D., and five of them were awarded gold medals for their thesis. Two women received the M.D. degree. For the degree of M.B., C.M., under the old regulations, there were four presentations. For the degree of M.B., Ch.B., there were 121 presented, of whom 11 were women. Eight graduated with first-class honours, including one lady, and 14 with second-class honours. Gold medals for their theses were awarded to James Walker Dawson for "An Experimental Investigation into the Histology of Inflammation and Repair Illustrated in the Healing of Incised Wounds and the Evolution of an Abscess"; to Auckland Campbell Geddes whose theme was "Acromegalic Gigantism"; to Edwin Matthew for "Investigations on the Action and Uses of Vaso-Dilator Substances in High Blood Pressure"; to Lindsay Stephen Milne, whose work was on "The Histology of the Regenerative Changes in the Liver Tissue"; and to James Alexander Murray for his "Contributions to the Comparative and Experimental Study of Cancer." The Ettles scholarship was awarded to Alexander Gibson as the most distinguished graduate of his year.

The Medical Education of Women in Edinburgh.

The Court of the University of Edinburgh at its last meeting solved the difficulties which had been raised in connexion with the medical education of women in Edinburgh by accepting the proposal of the lecturers that they should be directly recognised by the University instead of through the medium of the Court of the Scottish Association for the Medical Education of Women. As soon as the lecturers received this direct recognition from the University Court they formed themselves into the Edinburgh School of Medicine for Women and advertised that their classes would go on as formerly. Dr. William Russell has been appointed dean of the school. The office of the school is to be at Surgeons' Hall where arrangements have been promptly made for the accommodation of the lecturers who formerly taught in Minto House and where a sitting-room and other conveniences will be available by the beginning of the winter session for the use of the ladies. The experience of the past months has brought out very plainly the strong opposition there is to the two sexes being taught together, either inside or outside the University; and some who formerly leant towards joint teaching have been turned in the other direction. It has been freely stated that the women suffer from having extra-mural lecturers to teach them, while, as a matter of fact, the women have done remarkably well at the University examinations in the past; and as recently as the graduation ceremonial on July 24th a lady graduated with first-class honours who had received her whole medical training from the lecturers of the women's school.

Graduation Ceremony in the University of Glasgow.

The midsummer graduation ceremony took place at the University of Glasgow last week. This ceremony, which is almost entirely devoted to the conferring of medical degrees, occurs each year a week or two after the announcement of the results of the final examination for the degree M.B., Ch.B. There were 74 graduates who came forward for the M.B., Ch.B. degree and of these seven received the degree with "honours" and 11 with "commendation." There was a diminution this year in the number of lady graduates, only one receiving the degree "with commendation," and one other the "ordinary" degree. After the ceremony Dr. Samson Gemmell, the recently appointed professor to the chair of Systematic Medicine, delivered an address. He drew attention to the close connexion of commerce and medicine in the city of Glasgow. The University had done much for the city and the city for the University. They had recognised that their interests were identical, and at no time had this feeling been stronger than in the present day. It was only in a great centre of population that a medical school could flourish, at least in these days. It was only there that the material requisite for practical training could be properly secured. Hospitals were to the teacher of medicine what the laboratory was to the chemist, or the anatomical room to the anatomist. They constituted his practical department where experiments were continually in process waiting to be observed. Indeed, the close and constant observation of these experiments was of much more importance in medicine than in many other departments of knowledge, arising from the fact that medicine was more an art than a science. It was not his province to disparage systematic lectures in medicine, or to say that as books were now so plentiful and cheap, and as everyone could read, they were no longer necessary. They were essential and excellent as adjuncts, but only adjuncts, to what was far more important—namely, practical instruction at the bedside. From a long

experience he was convinced that such courses of lectures should be confined to discussion of difficult, doubtful, and important points of pathology, preceded by a sufficient statement of first principles suitable to the uninitiated. In his opinion no city in the kingdom was more admirably furnished than Glasgow for a great practical school of medicine, but hitherto much of the material requisite for this end had been unavailable. When the University migrated from the High-street to its present situation it necessarily severed its connexion with the Glasgow Royal Infirmary, which had previously afforded it material for practical instruction. Provision had to be made for this purpose on a western site and the establishment of the Western Infirmary was the result. Now he was willing to advocate a scheme whereby all the hospitals in the city would be rendered subservient to the training of the medical students of the University. Personal considerations and vested interests should not be allowed to stand too much in the way. The welfare of the medical school was paramount. It was for the interest, too, of the hospitals themselves, and not only for the students but also for the patients. In addition Dr. Gemmell advocated a more thorough organisation of the teaching of the out-door departments of the Glasgow hospitals in the interest of the students. Finally, if the student was to be able to take advantage of all such opportunities for practical work it was the opinion of many that his course of instruction must be either lightened or lengthened.

The University of Aberdeen: Summer Graduation.

The summer graduation at the University of Aberdeen took place in the Mitchell Hall of Marischal College on July 22nd. Principal Marshall Lang presided and there was a large attendance of the University authorities and of the general public. Ten gentlemen received the degree of M.D., five that of D.P.H., and 31 that of M.B., Ch.B. Principal Lang in his closing address referred briefly to the three-term session, the Education Bill, and to the teaching profession. The ceremony passed off without any undue disturbance on the part of the undergraduates.

Royal Army Medical Corps, Highland Division.

The Highland Division of the Royal Army Medical Corps commenced a route march on Saturday, July 18th. The corps assembled at the Grammar School grounds, Aberdeen, at 8 A.M. and left two hours later. The first camping ground was at Drum where the company arrived about 1.30. Rain fell during most of the time. On the following day a church parade was held, when the chaplain, the Rev. Jas. Smith, delivered an address on Patriotism. On Monday the march was continued to Banchory, on Tuesday to Wess, and on Wednesday to Dinnet where the camp was pitched on Professor A. Ogston's estate at Glendaven. On Thursday after breakfast the men were engaged in ambulance and dressing station work. Wagon drill and company drill were also practised. On Friday the corps was inspected by Brigadier-General Forbes Macbean, commanding the Highland Division, with his aides-de-camp, Major Hare and Colonel Babtie, V.C., A.M.S. Major Scott, I.M.S., and Colonel Scott Riddell, A.M.O., were also in attendance. Various operations were gone through and then the men were paraded into three sides of a square and addressed by General Macbean who expressed his gratification at the manner in which the work had been performed. The officers on parade were: Major Ashley Mackintosh (in command), Captain Fraser, Captain Smart, Captain Rorie, Captain Noble, Captain Mitchell, Captain and Adjutant J. M. Sloan, R.A.M.C., Lieutenant and Quartermaster Duthie, Lieutenant and Quartermaster Callan, Lieutenant Robertson, Lieutenant Mackintosh, Lieutenant Innes, and Chaplain Rev. J. Smith. The company returned to town on the following day.

July 28th.

IRELAND.

(FROM A SPECIAL CORRESPONDENT.)

A Consideration of the Tuberculosis Prevention (Ireland) Bill.

WHEN Mr. Birrell announced on July 21st in the House of Commons that, as sufficient consideration could not be given to the Tuberculosis Prevention (Ireland) Bill in committee owing to the present state of business, he proposed to reserve the Bill for consideration by a grand committee during the autumn session, it was generally felt that the postponement would give valuable time for deliberation on a confessedly difficult question. The problem of tuberculosis in Ireland is an intensely pressing one, for Ireland stands fourth highest of the various countries of the world in its mortality due to pulmonary consumption, and in Ireland more people die each year from tuberculosis than from all the principal epidemic diseases (influenza, whooping-cough, enteric fever, typhus fever, measles, scarlet fever, diphtheria, and diarrhœa) and cancer combined. Every patriotic Irishman sees that to stop the appalling mortality (11,736 deaths in 1906) from tuberculosis is the first thing to be done for the country, nor is this a new idea. On Nov. 29th, 1907, a deputation of medical corporations and societies (the Royal College of Physicians of Ireland, the Royal College of Surgeons in Ireland, the Irish Medical Association, the Veterinary Medical Association, the Cork Medical Society, the Ulster Medical Society, and others) was introduced to the Lord Lieutenant of Ireland, the Chief Secretary (Mr. Birrell), and the Vice-President of the Department of Agriculture (Mr. T. W. Russell) by Lady Aberdeen. The following four points were then put forward as essential: 1. That special legislation should be introduced without delay with the object of making it compulsory that all cases of tuberculosis should be notified, taking care at the same time to protect consumptive patients from any undue interference with their liberty. 2. That the adoption of more stringent and uniform measures for the regulation of milk and food supplies is urgently required. 3. That county councils in Ireland should be enabled to erect and to maintain such hospitals, sanatoriums, and dispensaries for the treatment of consumption as they think fit. 4. That there is urgent necessity for a system of medical inspection of schools and school children. The result was the introduction of the Tuberculosis Prevention (Ireland) Bill.

The most difficult and contentious point is that of compulsory notification. There can be no doubt that opinion in Ireland is becoming more and more decided in favour of the compulsory notification of tuberculosis for the following reasons: 1. In no other way can the locality of the disease or its stage be identified and unless both these facts are ascertained how can any attempt be made to deal with it from a public health point of view? Professor W. Osler said in a recent lecture in Dublin on What the Public can do in the Fight against Tuberculosis, "There must be compulsory notification," and in Ireland medical opinion is strongly on that side. 2. If compulsory notification of tuberculosis has been introduced in other places without causing any hardship to the sick and without any friction, why should not the same results occur in Ireland? In the circular issued recently by the Local Government Board of Scotland it is claimed that the Public Health (Scotland) Amendment Act of 1907 empowers local authorities to adopt notification for pulmonary phthisis and to administer the system without hardship to the individual. Ireland might enjoy the same privileges. 3. Compulsory notification would enable a great deal to be cleared up as to the causation of the disease, especially in its relation to the home, and would lead to an increased educational effect on the dwellers in the home as to the measures needed for the prevention of the disease.

In his Bill Mr. Birrell made an obvious mistake in leaving to the Local Government Board the right to prescribe the forms and stages of tuberculosis to which notification would apply. In his revised Bill it would be much wiser to leave nothing so important in a permissive or doubtful state. Instead of 1 and 2, Part I. of the present Bill, a clause such as the following should be inserted:—

> If any medical practitioner attending on any person becomes aware that this person is suffering from tuberculosis of any form, or at any stage, the medical practitioner shall forthwith send to the medical officer of health of the district in which the patient is a certificate, on a form to be supplied gratuitously by the sanitary authority, stating the name, age, sex, and place of residence, and employment or occupation of the person so suffering, and whether the case occurs in his private practice or in his practice as medical officer of any hospital, public body, friendly or other society, or institution.

There should also be an arrangement that if a medical man gives an undertaking that he will see that the required preventive measures are carried out and will report on their fulfilment at least twice in every year, no visits will be made to the patient's house by any member of the staff of the health department.

In New York, which was the first city in the world to

take specific measures actually against pulmonary tuberculosis, there has been compulsory notification since 1897, and here is what Dr. Hermann Biggs, the distinguished medical officer of that city, writes on the question :—

As tuberculosis radically differs from the more communicable diseases usually called contagious, so the measures for the sanitary supervision of tuberculosis must differ from the measures adapted in this class of disease. This should be the attitude of health authorities always in the enactment of all regulations. The information contained in the reports of cases should be regarded as confidential information and action should only be taken by the authorities in those instances where the conditions require it. The notification of a case of tuberculosis does not require any action on the part of the authorities if it seems reasonable to assume that such action is unnecessary. The very fact that tuberculosis is notified by the attending physician as a communicable disease has the greatest educational value and justifies the assumption in those instances in which the case is under the supervision of a private physician that reasonable and necessary precautions for the protection of others will be taken. If, however, the consumptive has the disease in an infectious stage and is without a home, or is living in a lodging-house, or in a poorly furnished room, or in a family in a tenement house, or is receiving charitable medical advice through some public institution, then all objection to the interference or the supervision of the authorities is removed, and in the interest of the public such interference and supervision becomes necessary. Such is the attitude which has been adopted in New York City. It is assumed and stated positively that in all instances where the consumptive is under the care of a private physician and the latter will undertake to give such instructions as are necessary to prevent the transmission of the disease to others no further cognisance of the case will be taken by the health authorities after the registration.

These are the methods which I hope Mr. Birrell will incorporate in his Bill for the Prevention of Tuberculosis in Ireland. All true friends of Ireland who wish this plague cleared out of their country want : (1) Compulsory notification of tuberculosis in the cities and counties in order to have clear scientific evidence where the disease is ; (2) no action on the part of the authorities is wanted in those cases where it is reasonable to assume that such action is unnecessary ; and (3) when it is evident that from the patient's environment and condition he or she should be sent to a hospital or sanatorium, he or she should be induced by pressure on the part of the public health authorities to avail himself or herself of such institutional care as seems desirable or available. If, however, the patient persistently refuses institutional care the authorities must be supplied with powers of forcible removal in those instances in which the insanitary conditions existing render it necessary. In Ireland there has been recently an outbreak of cerebro-spinal fever, and wherever it appeared it was promptly added by the authority of the Local Government Board to the list of notifiable diseases with the most rigorous enforcement of all the penalties pointed out in Dr. H. T. Bulstrode's recent report (p. 587), and yet beyond the fact that it was a rapidly fatal disease due to a specific organism what real scientific or clinical evidence is there that it is infectious as compared, say, with pulmonary tuberculosis, and yet in the case of the latter disease—perhaps owing to its chronicity—there is still among some a dislike to add it to the list of infectious diseases as was done in 1906 by the Scottish Local Government Board, which also decided that the same sections of the Public Health Act applicable to other infectious maladies are equally applicable to pulmonary consumption.

(FROM OUR OWN CORRESPONDENTS.)

Mercer's Hospital and Orthopædic Hospital : The Bazaar.

A meeting of the executive committee of this bazaar was held recently at the committee rooms, Orthopædic Hospital, Dublin. Mr. G. A. Newcomen was in the chair, and there were also present Colonel A. Courtenay, C.B., Mr. J. M. Lowry, Mr. R. L. Swan, ex-President of the Royal College of Surgeons in Ireland, Major Scott, Dr. W. C. Stevenson, Mr. Henry Moore, Mr. E. L'Estrange Ledwich, and Dr. W. S. Haughton and Mr. Seton S. Pringle, honorary secretaries. The report furnished by the honorary secretaries was to the effect that nearly 30 stalls had been arranged for, inclusive of the following county stalls : County Galway, Lady Ashtown and Colonel Courtenay ; County Meath, Mrs. Nicholson ; County Cork, Lady Fitzgerald Arnott ; County Roscommon, the Countess of Kingston ; County Wicklow, Mrs. Leslie Ellis ; County Leitrim, patroness, Mrs. Clements, honorary secretary, Mrs. Pentland ; County Kildare, Lady Annette La Touche ; and that a large number of patrons had been secured for the bazaar. The question of obtaining large prizes for balloting was discussed and referred to the ladies' committee. It was decided that turnstiles should be used wherever possible at the entrances to side shows and entertainments, &c. It was also decided that the sale of alcoholic drink should be strictly limited. This question will, however, be subjected to further discussion at a future meeting.

Terenure Sewerage Works.

The formal commencement in connexion with the scheme of Terenure sewerage took place on July 15th in the presence of a gathering of gentlemen who were interested in the carrying out of the project.

July 28th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Early Consequences of Overfeeding.

AT the Hospitals' Medical Society on July 17th Dr. Marcel Labbé reviewed this important question. Overfeeding may result from habit or from predilection or even from following medical advice, as for instance in the case of tuberculous, dyspeptic, and neurasthenic people. It is one of the commonest causes of ill health. Beside the late results to which it gives rise, such as obesity, gout, diabetes, and renal lithiasis, it causes a certain number of early symptoms, which taken together form a characteristic "syndrome." The clinical points of this condition are—increase of fatness which may be progressive or may give place to emaciation caused by digestive troubles. The gastric symptoms consist of a feeling of weight in, and swelling of, the abdomen after meals, and distension of the stomach. The intestinal symptoms may be of different kinds—sometimes atonic constipation with dilatation of the large intestine results, but more often the bowels act regularly once or twice a day, the motions being soft and offensive. The liver becomes hypertrophied and produces an excess of bile, which results in a cholæmic condition. Amongst the nervous symptoms are sleepiness after meals, insomnia and nightmare at night, an irritated and excited mental condition, neurasthenia, headache, and migraine. The temperature is often a little above the normal. The urine is dark, strong smelling ; on adding nitric acid to it a red-brown pigment appears, and it may contain some albumin. The disturbance of nutrition can be demonstrated by a systematic comparison between the diet and the urine excreted according to the method suggested by MM. M. and H. Labbé. An increased excretion of all the normal constituents of the urine on ordinary quantitative analysis indicates overfeeding. On comparing the results of this analysis with the exact weights of foodstuffs ingested the discovery of a deficiency in the intestinal function of absorption confirms this inference although it may be impossible to rely upon the patient's own statements. A deficiency in the intestinal absorption may be discovered easily by giving a test diet for three days. The symptoms of the condition may be slight but it may take a more serious form and result in disorders of the intestine, liver, or pancreas which will necessitate a prolonged course of treatment. The best course to adopt is a regular dietetic education and a proper "dosage" of food.

The Extraction of Foreign Bodies from the Bronchi and the Œsophagus.

At the Academy of Medicine on July 15th Dr. Guisez showed a collection of foreign bodies extracted from these passages by the help of broncho-œsophagoscopy—that is to say, by the direct illumination of the bronchi or œsophagus by means of a mirror. The author introduced this method into France and has employed it for five years with success, having treated 14 patients with foreign bodies of various descriptions and shapes in their bronchi, including bones, nails, and date-stones, and 18 others who had foreign bodies, many of which were of very irregular shape, such as artificial dentures, lodged in the œsophagus. Having regard to the severity of the surgical methods employed to extract such articles by direct operation, it may be said that the method of dealing with them *per vias naturales* is the safer.

A Demolition and a Dilemma.

Opposite the Hôtel Dieu, upon the bank of the Seine, there stands a building which is known as the Annexe of that famous hospital. On its other side is the Parvis Notre Dame,

the square upon which the old Hôtel Dieu stood until it was pulled down about 30 years ago when the present great building was opened. The Annexe was condemned a long time ago, but it has hitherto managed to escape destruction and has served for the reception of a certain number of patients, although the building is unsafe and its hygienic condition is a positive scandal. The only excuse for keeping it open has been that it does represent a certain amount of in-patient accommodation, which is notoriously insufficient in the Parisian hospitals for the needs of the capital. A day came, however, when the place began to fall down, so that it became unsafe to enter it, and the cost of patching it up was found to be too heavy to expend upon a condemned building. As the destruction of the old ruin could no longer be prevented it was resolved to proceed with it. But the inhabitants of the neighbourhood, who had been clamouring for its destruction for a long time, now raised another outcry and demanded that it should be destroyed by fire for fear lest the dust from the fabric of the building which harbours the mixed infection of many generations of patients should be scattered widely and sow disease through the whole district. The public health committee thought the matter sufficiently serious to appoint a commission to investigate the best method of destroying the Annexe without infecting the neighbourhood. M. Duguet, a member of the Academy of Medicine, has just published a report, which, rejecting the proposal to burn the building as dangerous, and finding that to blow it up with dynamite would be equally impracticable, recommends that it should be demolished in the ordinary manner after all its walls and wood-work have been washed with a disinfectant solution. The committee of public health accepted this sensible recommendation, but now a new difficulty has arisen. The housebreaker who accepted the contract at a certain price now refuses to carry it out, giving as his reason that the sum which he named had been reckoned on the basis of selling the old timber, but that this will be impossible after it has been soaked in poisonous disinfectants. The case is to go before the courts, and as it may take several years to decide it seems highly probable that the buildings will settle the dilemma by tumbling down of their own accord in spite of all the pious resolutions of committees.

A New Mixture for General Anæsthesia.

At the Chirurgical Society on July 19th M. Nélaton described an apparatus invented by M. Ombredanne for regulating the anæsthetic administration of ether. M. Nélaton has employed it 300 times in his theatre without any serious effects. M. Ombredanne's intention is to avert the unpleasant symptoms of chloroform and even those of ether (such as secondary bronchitis and retching) by employing a mixture of ether, pure air, and carbonic acid gas to produce an anæsthetic effect like that of chloroform. The use of the apparatus raises two questions. The first is on a point of theory. The inhalers in use up to the present have been constructed so that the patient shall breathe nothing but ether vapour.[1] The consequence is that the patient is anæsthetised but becomes asphyxiated, and it is necessary to stop the administration, with the result that he begins to come round again; then the process is repeated. In fact, it is asphyxia and not anæsthesia that is obtained. M. Ombredanne, however, observed that patients were rendered unconscious more quickly with ether, and in order to avoid the asphyxia he gave it in conjunction with pure air and carbonic acid. Anæsthesia is therefore obtained by means of a "closed" method with three substances the doses of which can be individually regulated. The addition of the carbonic acid appeared necessary to insure smooth breathing and recent observations have confirmed this view. As regards results, in at least 285 of the 300 cases in which M. Nélaton has used this apparatus it produced an anæsthesia like that of chloroform. In the other 15 there were troubles like those caused by pure ether anæsthesia. In 10 or 12 cyanosis, stertor, and asphyxia, such as are caused by old forms of inhaler, were noted. In the remaining three bronchitis supervened, which was mild in two cases and severe, but not fatal, in the third. On the whole M. Nélaton is very favourably impressed by this method of inducing anæsthesia.

July 28th.

[1] It is to be noted that our correspondent refers to the forms of ether inhaler hitherto in use in France and not to this country.—ED. L.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Medical Inspection of Industrial Establishments.

AT the last meeting of the "Aerztekammer" (Medical Council) Dr. Grün proposed a motion to the effect that the necessary steps should be taken by the council in order that general practitioners also should be appointed as inspectors of industrial establishments where the health of the employees is exposed to any risk. This pertains especially to occupations in which dangerous gases, explosive substances, or metal or mineral dust and particles endanger the health or the general well-being of the workers. Medical practitioners as a rule know better than chemists or engineers where the danger arises, their occupation bringing them often in touch with the results of negligent arrangements. Dr. Grün pointed out that in other countries, especially in France and in Germany, male and female medical practitioners filled such appointments to the utmost satisfaction of all concerned. The motion was adopted unanimously and the council has accordingly presented a petition to the Prime Minister asking him to comply with the wishes of the profession, especially as a new section of the Ministry of Commerce is now being organised devoted to "social politics," that is, to the welfare of those who are employed by private enterprise. The Minister expressed his willingness to carry out the idea.

The New Medical Regulations.

The chief Board of Health has considered the suggestions proposed by a number of medical institutions and Professor von Jaksch, the chief officer of the board, has reported to it regarding the following changes of the existing regulations. It must be kept in mind, however, that many of the rules now in force date back to the year 1770 and others to 1828. The following points are worth mentioning. A medical man in order to practise must duly give notice to the "Aerztekammer" (medical council) of his district; there are altogether 20 districts. His name must appear on the Medical Register. If a practitioner is found guilty of a crime or if he is condemned by the ethical committee his name can be struck off the Register for a year or for a longer period, but only in very bad cases can the erasure be permanent. A practitioner will not be allowed to practise in two or more different places at the same time unless he has an appointment necessitating his doing so. The giving of a medical certificate without a thorough examination or certification with clearly wrongful intention will be punished by the ethical committee by a fine not exceeding £40. Every medical man who has not *expressis verbis* resigned his practice must be prepared to render medical aid in cases of emergency unless he is unavoidably prevented from doing so. But the aid may be refused if he can prove that the same person has already misled him once in requiring medical aid from him. The practitioner can cease at once the treatment of a patient if his advice is not followed or if another practitioner is consulted without his knowledge. A new rule, and one which will remove an old hardship of the profession, stipulates that notification of infectious diseases must be paid for by the State. The "Aerztekammer" will receive the right to formulate an ethical standard for the profession and to punish transgressions of the rules. The political, religious, scientific, or therapeutic opinions of a medical man cannot be the object of such disciplinary measures, and anyone who is accused has the right to choose out of his fellow practitioners a counsel. The rules set forth herewith are fairly in agreement with the wishes of the majority of the practitioners, and the only point on which a large minority holds divergent views is as to striking a name off the Register. This seems too dangerous a weapon to be placed in the hands of medical men, inasmuch as racial and religious differences may warp the judgment of otherwise just men. At all events, the proposed changes are not yet law, although not much time will elapse before they will come into force. Then a modern view of the rights and duties of the medical practitioner will be codified, and the medical men, and especially the councils, will have a lawful means to fight the dangerous system of contract practice ("sweating the doctor"), for the members of the profession will have

granted to them expressly the right to organise for such purposes.

"To our Wives."

The Medical Society has caused a small leaflet to be printed and circulated widely amongst the wives of the lower and middle classes, in order to instruct them on the subject of infection and the value of hygiene. It bears the title, "An unsere Frauen" ("To our Wives"), and explains in terse, plain language the nature of infection and disinfection; it points out the results obtained in fighting puerperal sepsis by cleanliness during the last few weeks of pregnancy and during and after labour; and it explains also the nature and the danger of sexual disease, especially gonorrhœa. Women are cautioned against the danger of infection in matrimony, and since many a man marries with gonorrhœa still active in his body that part of the advice would be justly addressed to men as well. There is a movement in Austria and in Germany demanding that no infected man should be allowed to marry unless he is absolutely cured, and the extremists even demand the same chastity and purity from the bridegroom as is expected from the bride. The leaflet, whilst conceding the justice of such a demand, at the same time admits that at present it is hardly attainable. The whole leaflet, in spite of the information which it gives, can without hesitation be placed in the hands of every thinking wife. Indeed, the second object of the publication is to induce mothers to educate their sons in such a way that they would deem it a crime to infect their wives. The idealistic trend of the pamphlet is well illustrated by this aim, and it would be false modesty or "prudery" to say that women should not read such things.

100 Necropsies on Cases of "Hypoplastic Constitution."

Dr. J. Bartel, *privat-docent*, in a paper read before the Medical Society of Vienna, reported the findings of 100 necropsies performed by him on persons with "hypoplastic constitution"; the series comprised 62 females and 38 males. Nearly all were above the average height for their age, the greatest difference in comparison with the average being 38 centimetres (16 inches). The panniculus adiposus was, with only three exceptions, very marked; in many cases it was extraordinarily so. In 70 per cent. there was hypoplasia of the genital organs as well as a hypoplastic arterial system; the genital organs were sometimes simply infantile. The lymphatic tissue was hyperplastic, especially in the regions of mucous membranes. A large persistent thymus was noted in 12 per cent. of the cases. In a few instances hypertrophy of the brain was observed. Chronic internal hydrocephalus, with or without colloid degeneration of the thyroid gland, complicated the condition. Anomalies of development were the rule: an open foramen ovale, anomalies of the uterus, malformation of the bladder, liver, &c. Rhachitis of the long bones and coxa vara were noticed frequently. The history often revealed a hereditary taint, mostly syphilis and tuberculosis. As regards the causes of death, there were 11 cases of sudden death (anæsthesia, suicide), 14 cases of fatal anomalies of pregnancy, and 28 cases of infectious diseases (amongst them 15 acute and 13 tuberculosis). In 12 other cases tuberculosis of the adrenals was also noticed. Six succumbed to nephritis, three to juvenile diabetes, and 15 to tumours (of these 12 attacked the head). The age incidence was: 21 were from 0 to 14 years, 42 were 15 to 25 years, 16 were 26 to 35 years, 17 were 36 to 45 years, and four were 46 to 65 years. Syphilis and tuberculosis seem to play a prominent part in the production of a hypoplastic constitution; very often congenital infection must be supposed. At all events, observations will have to be continued before a definite opinion can be given as to the etiological factor.

Transplantation of Rib Cartilage for Defect of the Parietal Bone.

Dr. Lotheissen has recently demonstrated two children, aged two years and five years respectively, before the Surgical Society on account of an interesting plastic operation performed by him on them. Both had sustained injuries of the head, parts of the parietal bones having been crushed. Thus a defect resulted measuring about three square inches in each case. As there was no dura mater at his disposal Dr. Lotheissen performed a subaponeurotic plastic operation by turning over a flap of periosteum from the neighbourhood and implanted on it three pieces of cartilage which had been obtained from the costal arch. In one case these pieces did not unite and he had to reimplant fresh cartilage by bringing it under the skin next to the defect and then, after it had united there, mobilising the flap over the gap after six weeks. This method seems to be very useful in children; the concavity of the costal cartilage corresponds well with the outlines of the parietal bone, the parts being easily adapted. The x rays showed that ossification had actually begun, but it will have to be controlled by repeated examinations. Heteroplasty (a celluloid plate) would not have been advisable, since the child's own bone and even the first cartilage had not been tolerated by the irritated wound.

July 27th.

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

Calcutta Health Department.

AT a recent meeting the Calcutta corporation was mainly concerned with the question of the amalgamation of the health and plague departments which was eventually agreed to. It was decided to amalgamate the two departments under the health officer, the subordinate staff employed as recommended by the chairman and district health officers being retained on their present grade of pay, and that an assistant to the health officer should be appointed at a salary of from Rs.750 to Rs.1000 specially to look after the plague department under the health officer. He was to assist the officer in his other duties when required.

A Coroner wanted at Rangoon.

The institution of a coroner's court in Rangoon appears desirable in view of the abnormal number of suspicious deaths and deaths from violence, and the necessity for a tribunal of the kind is emphasised by the recent building collapse in Merchant-street. The absence of a coroner's court in Rangoon is an incentive to loss of life and the local government would strengthen the administration of the province by establishing such a court. In the weekly death returns I find that many deaths are attributed to "other causes," details of which might well be laid bare; they might well provide an additional argument for the establishment of a coroner's court.

Mortality due to Wild Animals and Snakes.

The conflict between mankind and the untamed cruelty of nature is brought home grimly to the reader of the recently issued fifth part of the "Statistics of British India." Therein is the statement that in the last 25 years no fewer than 606,370 persons have been killed in India by wild animals or snakes. Nor is this large aggregate of deaths from this cause more notable than is the persistence of this feature of the death returns. The annual mortality due to snakes has indeed increased within the last 15 years. In the five years 1892–96 the average number of deaths per year was 20,976. In the succeeding quinquennium it rose to 22,536 and in 1906 snake-bites were responsible for 22,854 deaths. The accuracy of the figures may not be all that could be desired. Doubtless it is true that deaths which are due to crime are sometimes attributed to snakes or wild animals. But it is fair to suppose that this error is corrected by the omission of other unreported deaths which were really caused by wild beasts.

Plague at Satara.

His Excellency the Governor of Bombay received the gentlemen of the Satara district who assisted in the plague operations in the district during last winter at Government House, Mahableshwar, on May 27th. In opening the proceedings His Excellency said that he was glad to have an opportunity of thanking his guests personally for helping the Government in its efforts to save the lives of the people. After dwelling on the deplorable loss of human life due to the plague His Excellency explained that the Government was doing all that it could to persuade the people to adopt preventive measures, but compulsion would never be resorted to. Without, therefore, the active assistance of those who could bring direct influence to bear in the villages the measures of the Government could not be successful. Tokens of honour were presented to the guests before the conclusion of the reception.

July 1st.

THE BRITISH MEDICAL ASSOCIATION.

SEVENTY-SIXTH ANNUAL MEETING AT SHEFFIELD.

It is a far cry from the placid capital city of Devon, where last the British Medical Association assembled in plenary congress, to this smoke-grimed seething hive of industry, with the noise of labour ringing through every thoroughfare, which is set in the southern corner of Yorkshire, sending a western suburb over the Derbyshire border. But though the streets and environs of Sheffield show the grimmest aspect of a great industrial city, yet the citizens of Exeter have no readier access to clean air and sweeping moorland spaces than have the toilers in the grinding shops and forges of the busy town which during this last week has entertained the Association for the third time in its history.

The first occasion was in 1845 when the "Provincial Medical and Surgical Association"—as was then its title—met in Sheffield under the presidency of Dr. Charles Favell. Medical men would seem to have led a more strenuous life at their festival gatherings in those days, for the facsimile copy of the card of admission to that meeting states that "Mr. W. Jackson, Mr. Ray, and Mr. Beckitt will be at the Cuttlers' Hall at half-past six on Thursday morning to accompany Members of the Association to the Botanical Gardens, the Cemetery, the Shrewsbury Hospital, the Cholera Ground." The object of the second visit was doubtless to effect a salutary chastening of professional pride. In 1876 the British Medical Association met in Sheffield under its present title, with Dr. J. H. Keeling, who is still in practice in the town, as general secretary, and the late Dr. de Bartolomé as President.

Since that year Sheffield has attained a population not much short of half a million, and the extension of workmen's dwellings has marred considerably the beauty of its immediate neighbourhood. As a set-off to this, however, the municipality has installed an admirable service of electric tramcars, which for 1*d*. carry a passenger for three miles over some of the steepest of the seven hills upon which the town is built, and deposit him within a quarter of an hour's walk of beautiful country of an elevation of a thousand feet. These beneficent cars might aptly be called the lungs of Sheffield. The town has around it six public parks and there are other open recreation grounds in the city, as well as the Botanical Gardens and the Endcliffe Woods, which the corporation has purchased to the great advantage of the public health.

The industrial population has excellent opportunities of "cultivating" itself, both in the storehouse of artistic treasures which John Ruskin founded in 1875, and which is now placed in Meersbrook Park, and in the Mappin Art Gallery in Weston Park. The latter contains a good collection of modern English art, the former some admirable early Turners, many beautiful illuminated missals and codices, and a collection of uncut precious stones which bring to mind the founder's "Ethics of the Dust." The library includes a black-letter Chaucer of 1550. Two museums, one in Weston Park, which adjoins the University, and the other, including a natural history room, in High Hazels Park, with many libraries and scientific and literary societies and institutions also bear witness that the soul of Sheffield is not deadened in the iron-handed grip of labour. But the members of the Association during the week, by the courtesy of many employers, have had opportunity to see for themselves the part played by labour in the city's life. As everybody knows, cutlery, armour-plating for battleships, general engineering works, and silver-plating (but no longer on copper) bring the city much of its wealth. Amongst the workshops visited have been those of Messrs. Vickers, Sons, and Maxim and of John Brown and Co. who built the *Lusitania*, whilst the Nunnery Colliery Co. have allowed several parties to inspect a coal-mine. The civic authorities and many prominent residents in the neighbourhood have been equally ready to offer entertainment and hospitality to the Association, whilst the proximity of Sheffield to Buxton, Castleton, and the Peak district, Haddon Hall, the Matlocks, the valley of the Derwent, and the parkland country known as "the Dukeries" has allowed the excursion committee to arrange a series of outings of exceptional beauty and interest. These trips have extended even as far as York and Harrogate.

Although the scientific work of the Association has occupied the attention of 17 sections the hospitality of the youngest University in Great Britain has enabled all this business to be conducted under one roof, a concentration which has proved of great convenience. The University is just three years old. Its earliest nucleus was the medical school founded by Dr. (afterwards Sir) Arnold Knight in 1828, but the Firth College, founded in 1879, was its real parent. This College was incorporated with the technical school and the medical school as the University College of Sheffield by Royal Charter in 1897, and the present status was demanded at the disruption of the Victoria University in 1902, when Leeds refused to associate with Sheffield in founding a single University for Yorkshire. The University has four faculties, those of arts, pure science, medicine, and applied science. It is an imposing pile of masonry with a castellated tower in which the Association has met, but its Tudor architecture will better become it when Sheffield smoke has quieted down its brilliant redness, for at present it is the cleanest building in Sheffield. The Firth Hall, where the full gatherings of the Association have been held, is a really fine modern piece of "Tudor" work with its openwork oak roof and mouldings and imposing mullioned windows. The only other buildings used by the Association have been the Drill Hall, where the exhibition was held, and the Educational Hall which accommodated the representative meetings.

Of the other public buildings in Sheffield the medical visitors have been naturally interested in the hospitals, of which the Royal Infirmary has 255 beds and the Sheffield Royal Hospital, which is to be enlarged, has 165. This is its jubilee year but it was rebuilt in 1895. There is also a hospital for women (the Jessop) and a children's hospital near the University. Those who found their way into the medical school must have been struck with the excellent equipment, especially of its anatomical department. It is interesting to recall that in 1835 an anatomical school in Sheffield was sacked by a mob furious at the report of the trial of Burke and Hare in Edinburgh.

Sheffield is presumably a flourishing city and well able to administer to the health and well-being of its citizens, and yet, however satisfactorily its ordinary public health service is maintained, there is one very dark blot upon its hygienic escutcheon. Even in this beautiful July weather the air is full of smoke and the eyes of the visitor ache with the acrid constituents poured into the atmosphere by the numerous factories scattered over and around the city. Much of the city lies in a hollow and this is continuously bathed in smoke. The position and aspect of the city are beautiful; like Rome, it is built upon seven hills and yet there is no

single vista which is not besmirched by the foul unhindered outpourings of a mass of tall chimneys. The blue sky is shut out on a glorious July day and the inspiriting and invigorating chemical rays of the sun are denied to the citizens because they or their representatives in council do not realise the importance of an unsullied air. Sheffield has a splendid opportunity of proving to the world that smoke need not be and that she could, phœnix-like, rise out of the ashes of her dirt and gloom and appear, as she can appear, a beautiful and beautified city. For some reason the smoky air does not lend an artistic touch to the buildings, for they are so regularly coated with soot as to appear as though they had been exposed purposely to the smutty torrent of a smoky flame.

On Monday afternoon the Lord Mayor and Lady Mayoress (Alderman and Mrs. H. P. Marsh) held a reception of fully 800 guests in the Town Hall which, with its marble staircase and splendid suite of oak-panelled reception rooms, is fitted admirably for the exercise of civic hospitality. The next civic function was the service at the parish church on Tuesday at mid-day, which the Lord Mayor and Master Cutler attended in state. The church was well filled, the central aisle being occupied by medical men in academical robes. The preacher was the Bishop of Sheffield. He took his text from Isaiah xl. 9 after reading a long bidding prayer. After welcoming the Association, he pleaded for an active and a practical coöperation between science and faith in the persons of their respective ministers. He feared that owing to a recent reaction of feeling "the danger now is not the exclusion of clergymen from the sick-room but the exclusion of the medical man." He deprecated the modern tendency to rely in sickness on "Christian Science" and "faith-healing." He thanked the medical profession for their beneficent work in the cause of healing and of sanitation, and said that it could best be carried out by a recognition of the healthy influence of mind over body and of spirit over both. He was convinced that the present trend of religious thought amongst men of science was, in Tennyson's words, to "cleave to the sunnier side of doubt, and cleave to Faith beyond the forms of Faith." It was an address excellently suited to the occasion and the congregation.

For several years the advisability of applying for a Charter has been a vexed question with the British Medical Association. On Monday the representative meeting decided by 105 votes to 1 that this step shall be taken.

Mr. Simeon Snell, the President-Elect, entertained some 130 leading members and guests of the Association and prominent citizens of Sheffield to dinner at the Royal Victoria Hotel on Monday evening. The company included the Lord Mayor of Sheffield, the Master Cutler (Mr. H. H. Bedford), Dr. H. Davy (the retiring President), the Bishop of Sheffield, Sir W. Clegg, Sir Victor Horsley, Dr. D. Argyll Robertson, Professor W. Osler, Professor T. Oliver, Surgeon-General Sir Charles Cuffe, A.M.S. (retired), Mr. Edmund Owen, Professor Neisser, Dr. J. Lucas-Championnière, Professor Axel Holst, Mr. H. A. Ballance, Mr. Guy Elliston, and Dr. Dawson Williams. It was a private gathering and no toasts were given save the health of the host. Mr. J. Lycett contributed several songs with feeling and accomplishment, otherwise the evening was passed pleasantly in conversation.

The adjourned general meeting of members took place on Tuesday afternoon at the University. Dr. Henry Davy first vacated the chair to Mr. Simeon Snell and then Mr. Edmund Owen, chairman of the Council, announced that the Association had accepted the invitation to meet in Belfast in 1909, under the presidency of Sir William Whitla whom the meeting welcomed warmly. After a vote of thanks had been passed to Dr. Henry Davy, the retiring President, he was elected a Vice-President for life. The meeting then elected the Lord Mayor, the Master Cutler of Sheffield, and the Pro-Chancellor of the University (Mr. G. Franklin, Litt.D.) as honorary members of the Association. These gentlemen were presented with their certificates in the evening when the meeting reassembled in the Firth Hall of the University to hear the President's address. Other interesting ceremonies at this well-attended function were the presentation of the badge of office to the President by his Sheffield colleagues, the reception of the foreign guests and delegates, the presentation of the Middlemore prize to Mr. Simeon Snell for his contributions to the science of ophthalmology, and the presentation of the Stewart prize to Colonel Sir David Bruce, C.B., R.A.M.C., for his researches as to the origin and prevention of Mediterranean fever.

The following is the list of distinguished foreign guests, a few of whom were prevented from attending by unavoidable causes:—From European countries: Professor Axenfeld, Freiburg; Professor Bouchard, Paris; Professor Bossi, Genoa; Professor Carozzi, Milan; Dr. Depage, Brussels; Professor Farno, Florence; Professor Fuchs, Vienna; Professor Gilchrist, Nice; Professor Hartmann, Paris; Professor Axel Holst, Christiania; Professor Kolli, Bern; Professor von Krönig, Freiburg; Dr. Lucas-Championnière, Paris; Professor Luigi Mangiagalli, Milan; Staff-Surgeon Munter, representing the Medical Service of the German Army; Dr. Nattan-Larrier, Calvados; Professor A. Neisser, Breslau; Dr. Noiré, Paris; Dr. Onodi, Budapest; Dr. Sabouraud, Paris; Professor Zweifel, Leipsic; Professor Tillmanns, Leipsic; Dr. C. Willems, Ghent; Professor Ambrose Monprofit, Angers; Professor A. Plehn, Berlin; Dr. Marc Armand Ruffer, Egypt; Mr. J. G. Willmore, Egypt; Dr. E. Marchoux, Paris; and Professor Pozzi, Paris. From the United States of America: Professor Gilchrist, Baltimore; Professor Garceau, San Francisco; Professor Holt, New York; Dr. Charles Leonard, Philadelphia; Dr. J. B. Murphy, Chicago; Dr. H. H. Pratt, Baltimore; Dr. Marcy Riverton, N.J.; and Dr. Maurice Richardson, Boston.

Many of the foreign guests of the Association were entertained to dinner on July 25th in the Regent Saloon of the Café Monico, London, by Dr. H. Macnaughton-Jones who was in the chair. Dr. F. H. Champneys, speaking in the German language, welcomed the German guests; this was acknowledged by Professor P. Zweifel of Leipsic and by Professor Krönig of Freiburg. Sir Felix Semon then addressed a welcome to the Italian guests and a hearty acknowledgment of this was rendered by Professor Mangiagalli of Milan and Professor Bossi of Genoa. After the health of the chairman, proposed by Mr. Alban Doran, had been replied to, the guests dispersed.

The following is a complete list of delegates from colonial branches attending the meeting:—Burma: Major E. R. Rost, I.M.S. Canada: Dr. I. H. Cameron, Dr. J. T. Fotheringham, Dr. A. R. Gordon, Dr. George Hall, Professor J. J. Mackenzie, Dr. J. F. W. Ross, Dr. H. Scadding, and Dr. C. L. Starr. Ceylon: Dr. S. C. Paul. Gibraltar: Dr. L. D. Parsons and Major O. L. Robinson, R.A.M.C. Griqualand West: Dr. E. O. Ashe. Hong-Kong: Dr. F. W. Clark and Mr. O. Marriott. Malaya: Dr. J. Kirk and Dr. Malcolm Watson. Natal: Dr. W. J. Woods. New South Wales: Mr. B. J. Newmarch and Dr. R. H. Todd. New Zealand: Dr. H. Lindo Ferguson and Dr. A. E. Martin.

Queensland: Dr. Hamilton, Mr. C. S. Hawkes, Mr. H. L'Estrange, and Mr. D. P. O'Brien. South Australia: Dr. A. A. Lendon and Dr. Alexander M. Morgan. South India: Lieutenant-Colonel F. C. Reeves, I.M.S. Transvaal: Dr. G. Michie. Victoria (Australia): Dr. W. W. Morton. West Australia: Dr. W. Trethowan.

The annual exhibition of drugs, special foods, and surgical and hygienic appliances was held in the Drill Hall, Glossop-road. The position was fairly central and midway between the chief hotels and the University buildings in which the sectional meetings were held. On the whole, the accommodation provided for the exhibitors was somewhat limited owing to the smallness of the hall, but the best use was made of the space and the visitors took quite a keen interest in the articles displayed. One decided drawback was the glass roof of the hall which, excellent though it was for shedding a brilliant light on the stalls, yet permitted also the heat rays to pass with the result that as most of the days were sunny the air was uncomfortably hot and close. The proceedings were enlivened by a programme of music provided by the Blue Imperial Band.

The stalls were very tastefully and attractively decorated and practically every department of accessories in medical science was represented. There were a good many electrical appliances shown and a feature also was the attention given to mechanical appliances, vibrators, and so forth. Physics and chemistry had also a fair representation, and it was pleasing to note that the exhibition presents a scientific as well as a commercial side. The attendance was good and there were occasions when the discussions on new introductions comprising surgical and hygienic appliances, foods, analytical processes, drugs, and electrical developments were so animated as to give the impression that a real lively interest had been imported into this section of the annual meeting. In another column we give, as before, an account by one of our representatives of the various exhibits which excited this interest. For this purpose the more important exhibits are classified under the following heads: (1) Surgical Instruments and Appliances; (2) Drugs; (3) Foods and Food Products; (4) Sanitary Appliances; (5) Mineral Waters, Beverages, &c.; (6) Publications; and (7) Exhibits of a Miscellaneous Character. Viewed generally, it may be said that the representation of each division was fairly equal.

We desire to express our thanks for the great courtesy and assistance extended to our representatives by the organising secretaries of the meeting and by the editorial staff of the *British Medical Journal*. The Handbook and Guide to Sheffield, compiled by Dr. W. S. Porter, has been of material assistance in the compilation of some of these notes. The arrangements for the whole meeting have been organised with thoroughness and a complete success that has insured the comfort of the visitors to Sheffield.

THE SECTIONS.

MEDICINE.

WEDNESDAY, JULY 29TH.

Dr. W. DYSON (Sheffield), the President of the section, opened the proceedings and announced a discussion on

Splenic Enlargements other than Leukæmic.

Professor W. OSLER (Oxford) in introducing this discussion referred to the obscurity of the subject, due, as he considered, to the imperfect knowledge of the function of the spleen. It was not an organ necessary to life, as had been known for 300 years. He gave the following clinical classification of chronic enlargements of the spleen: (1) those in disturbances of metabolism and intestinal affections of children, as in rickets and amyloid disease, also in large ill-defined group in children; (2) in chronic infections, as in syphilis, malaria, kala-azar and other forms of tropical splenomegaly, in Hodgkin's disease, and in tuberculosis; (3) in primary disturbances in the blood-forming organs, as in leukæmia, possibly chlorosis, in some cases of pernicious anæmia and in splenomegalic polycythæmia; (4) in association with cirrhosis of the liver, whether syphilitic or alcoholic, in hypertrophic cirrhosis, either Hanot's or with hæmachromatosis; (5) hereditary and family forms and in isolated cases as in the congenital acholuric icterus with splenomegaly, and in the family form of splenomegaly with dwarfing; (6) in new growths, as in diffuse infiltrating sarcoma and the infiltrating endothelioma of Gaucher; and (7) splenic enlargements not yet correlated with any of the above or any known cause, as in simple splenomegaly, in splenomegaly with anæmia, and in that with anæmia, jaundice, and ascites, splenic anæmia and Banti's disease. One of the more remarkable features of cases of splenic anæmia and Banti's disease was that the condition was in some cases curable by the surgical removal of the spleen.

Professor W. BOUCHARD (Paris), speaking in French, said he had published in 1889, again in 1891, and in 1900, certain facts he had observed since 1886, which he had called the splenic souffle in the enlarged spleen. Of five cases, in three there was an associated cirrhosis of the liver and in the two others it was probable. He had also heard it in a case of splenomegalic leukæmia. Along with it he had noticed marked systolic expansion of the arteries and even capillary pulsation but without any sign of aortic insufficiency. In the cirrhotic cases he had also noticed nævi and serious internal hæmorrhages. He had seen much improvement in some of these cases from the internal administration of calomel.

Professor W. SAUNDBY (Birmingham) said that on looking through his cases, excluding those of leukæmia, he had found that the most frequent cases of splenic enlargement were cases of lymphadenoma and heart disease, and in association with cirrhosis of the liver. Other less frequent causes were malaria, tubercle, syphilis, pernicious anæmia, splenomegalic polycythæmia, and thrombosis of the splenic vein. The cases associated with jaundice occurring in families for several generations he would distinguish from some of the cases called Banti's disease or splenic anæmia; many of these proved fatal, but in others the general health was but little affected. Congenital cholæmia probably occurred in various degrees of intensity.

Dr. G. A. GIBSON (Edinburgh) alluded especially to splenomegalic polycythæmia; he had previously thought the whole condition must be secondary to circulatory disturbance but had altered his view. He described one case at present under his observation dating from four years ago. No trace of free hydrochloric acid was found after a test meal had been given. Considerable improvement followed the application of the x rays but relapse occurred. Improvement again followed x ray treatment, which improvement lasted for nearly two years, but the splenic enlargement became greater than ever and instead of 4,500,000 as before there were 12,000,000 red cells, 120 per cent. instead of 87 per cent. hæmoglobin, and 30,000 instead of 10,000 leucocytes. The patient became purplish, the viscosity of his blood twice, and its coagulability twice, the normal. A small portion of red bone marrow was removed surgically from the tibia. This showed a great dilatation of the blood channels, a marked disappearance of the myelocytes, an increase in the nucleated red cells and in the fully formed red cells, also large aggregations of small cells of uncertain nature, possibly small lymphocytes or possibly small nucleated red cells, the whole, however, pointing to changes in the bone marrow as at least a large part of the essential underlying changes in the condition.

Dr. H. D. ROLLESTON (London) said that he would have liked to limit the discussion to the cases in which the spleen alone was enlarged. The chronic splenic anæmia of adults ought to be recognised as a definite clinical condition but not as a disease, for post mortem the changes found in the spleen were not always the same. Two types might be recognised, one with marked fibrosis and considerable endothelial proliferation; and the other (Gaucher's type) a chronic endothelioma, possibly a

primary new growth, but in Dr. Rolleston's opinion probably not a malignant endothelial proliferation. He would distinguish between Banti's disease and chronic splenic anæmia; the former term should be restricted to a terminal cirrhosis in a chronic splenic anæmia. In cases of syphilis the enlargement of the spleen might not be necessarily syphilitic but due to some other chronic infection predisposed to by the syphilis. Any enlargement of the spleen in heart disease (apart from ulcerative endocarditis) was probably due to some complication such as an embolism, &c. Back-pressure alone was not, in his experience, sufficient to cause it. As to operation, he thought the danger of removing the spleen in chronic splenic anæmia was very great, particularly from the occurrence of secondary hæmorrhage; he was not so sanguine in respect to this form of treatment as he had formerly been. In dealing with the cases of enlargement of the spleen with jaundice, he said that the congenital cases might or might not be hereditary. In the congenital cases the patients bore the condition very well and it might ultimately become transmitted. The congenital cases showed more jaundice and less anæmia; in the acquired cases the reverse was the case. In chronic splenic anæmia with jaundice it had been suggested that the spleen was responsible for a hæmolytic jaundice and that the red blood cells were more vulnerable and smaller than natural. The blood changes in the jaundice cases were very much those of chronic splenic anæmia and it was probable that these cases ran into each other and into Hanot's cirrhosis and Banti's disease. As to etiology, a chronic infection and a subsequent cholangitis was more attractive than the hæmolytic view.

Dr. J. GALLOWAY (London) showed a specimen of a spleen from a child, aged seven years, with only little blood change and jaundice but with considerable pigmentation; also a drawing of a case of Hodgkin's disease, with lymphadenomatous tumours in the skin and intense pruritus; and a specimen showing the influence of syphilis on splenic enlargement. There was chronic heart failure with back-pressure but the patient had persistent anæmia and great enlargement of the spleen. There were found syphilis of the heart and obliterating arteritis in the spleen either primarily syphilitic or secondary.

Dr. ROBERT HUTCHISON (London) dealt with chronic enlargements of the spleen in children, all, as a matter of experience, being of the non-leukæmic sort. The commonest was the condition known as pseudo-leukæmia infantum, with chronic enlargement of the spleen, anæmia, and a degree of leucocytosis. Two causes had been assigned—namely, rickets and congenital syphilis; rickets might be at once excluded, and the latter might perhaps be excluded in half of the cases. After the age of two years many of the cases of splenic enlargement were survivals of cases of pseudo-leukæmia infantum. Others might be a purely splenic form of lymphadenoma (Hodgkin's disease); their occurrence was, however, not yet certain. Other cases seen in children but occurring up to the age of 10 or 12 were often diagnosed at first as splenic anæmia, but had hæmorrhages, jaundice, and ascites followed by death and were like very rapid cases of Banti's disease. In two cases he had had definite evidence of congenital syphilis. Many cases of splenic enlargement in children were really, therefore, the expression of the reaction of lymphoid tissue to a chronic intoxication, whether syphilitic or other.

Dr. W. HUNTER (Glasgow) referred to three cases of splenic enlargement that he had had under observation lately.

Dr. C. H. MELLAND (Manchester) confined himself to the consideration of a group of cases like leukæmia, but with no leucocytosis, only enlargement of the spleen with myelocytes in the blood and other blood changes resembling those of leukæmia. To one group of cases the term leukanæmia had been given. These had to be distinguished from early cases of splenic anæmia or Banti's disease, as no removal of the spleen could be of use in them.

Dr. F. EVE (Hull) referred to the matter of operation in Banti's disease and argued that if it were to be employed at all it should be before the liver became cirrhotic.

Dr. W. J. TYSON (Folkestone) alluded to the congenital syphilitic enlargement of the spleen in children; the splenomegaly might be the only sign and it in the course of years disappeared, so that a good prognosis might be given.

Dr. W. M. OUSTON (Sutton Bridge) brought forward a case of splenomegalic polycythæmia with chronic rheumatoid arthritis, in which improvement was noticed after venesection, and argued for intestinal irrigation as a means of treatment.

Professor OSLER, in reply, said the splenic souffle was not often heard because not often listened for. It was not his experience that the spleen alone was involved without the lymph glands in lymphadenoma. The two groups of cases of splenic enlargement with jaundice would probably be soon differentiated, for example, as (1) those with good health and acholuric; and (2) the fatal cases. As to operative treatmen, it was not called for in a large proportion of the cases, the patients lived on comfortably for many years; the two conditions calling for operation were the recurring hæmorrhages and the onset of jaundice indicating implication of the liver. The points in regard to splenic enlargements needing early elucidation were the family forms, the cases in children, the exact relationship of the group of cases of chronic splenic anæmia, and the variety of polycythæmic splenomegaly.

SURGERY.

WEDNESDAY, JULY 29TH.

President, Mr. SINCLAIR WHITE.

Sir WILLIAM WATSON CHEYNE, Bart., C.B. (London), opened a discussion on

The Diagnosis and Treatment of Malignant Disease of the Breast.

He remarked that the diagnosis of malignant disease of the breast is often very easy, but it is sometimes difficult, and especially it is difficult in those cases which are the most suitable for treatment, such as the very early cases in which none of the classical signs are present. In examining a case for the purpose of diagnosis it is extremely important for the surgeon to bear in mind that it is possible by pressing a cancer to press the malignant cells along the blood-vessels or lymphatics and thus to aid in spreading the disease. The breast and the tumour must therefore be handled with extreme gentleness. The first point in the diagnosis is to inspect the two breasts, as by that means a difference of level of the two nipples is sometimes observable; it is a very valuable test because it is very early. It is caused by shrinking of the tumour, so that the nipple of the affected breast is the higher. The sign may not be present, but if it is present it is almost pathognomonic. The next sign is the presence of puckers and dimples over the swelling, due to traction on the skin. The motility of the skin over the tumour is important, and even if only a very slight difference is present it is of great importance. A further point is the adhesion, slight or marked, of the swelling to the underlying tissue. The characteristic mass may be present but it may be small, and then the chief characteristic of importance is the ill-defined character of the edge of the tumour. It is especially difficult to diagnose a carcinoma from a localised patch of mastitis. The diagnosis from a cyst is also sometimes difficult, but the cyst is freely moveable, while the carcinoma is nearly always more or less fixed. Lastly, the age of the patient must be taken into consideration; if the patient is over the age of 40, the probability of the tumour being malignant is very great. In all doubtful cases operation is advisable and the surgeon should obtain permission to go on to complete removal should it be found necessary. As to the examination of a tumour it should never be cut into *in situ*, but it should be excised and a slice should be examined microscopically and if it be found to be malignant the complete operation should be performed at once. It is not necessary at the present day to discuss the utility of extensive operations for cancer of the breast; the great improvement which has resulted during the last few years as regards the question of recurrence is generally admitted; the main points which arise are matters of technique. Three points have to be borne in mind in carrying out the operation: (1) to remove the disease thoroughly; (2) to avoid dissemination of the cancer cells while doing so; and (3) to obtain a good functional result afterwards. As to the removal of the disease, it is not possible to designate the necessary operation by the name of any particular surgeon because the details vary much according to various circumstances; the pathological facts worked out by Heidenhain, Stiles, and others must

be borne in mind in each individual case. The skin incision must vary according to the individual case; if the skin is involved it must be removed widely. If the growth occurs towards the periphery an angular incision will need to be made, but the incision through the skin must at no place approach within two inches of the area of involved skin. The subjacent fascia must be even more extensively removed than the skin, for it has been shown that the fascia is always more widely involved. In every case some of the pectoralis major must be removed, and if the growth is adherent to the fascia the whole of the sternal portion of the muscle must be taken away, but it is never necessary to remove the clavicular portion of the pectoralis major. The pectoralis minor need not be removed, though the fascia covering it should be stripped off. The lymphatic glands and vessels of the axilla must be thoroughly taken away in one mass. The posterior triangle of the neck should be more often cleared out than it is, especially in those cases where the axilla is much affected. In the second place, the surgeon must avoid dissemination of the cancer cells during the operation. He should not cut into any affected tissues lest the cancer cells be strewn over the surface of the wound. Thus when the axilla is cleared out the dissection should begin at the apex and be carried downwards so as to cut off the lymphatic connexions before the contents of the axilla are handled. It must be borne in mind that there are three directions in which the lymphatics pass up into the axilla. As to the functional result, it is often surprising how good it is. The wound can usually be closed by free under-cutting of the skin. There is no need to improve the movements of the arm by attempts at anastomosing the inner portion of the deltoid with the stump of the pectoralis major. The function of the arm is improved by keeping the limb at a right angle after the operation and by subsequent massage. Swelling of the arm can generally be removed by massage, or the operation recently introduced by Mr. Sampson Handley may be employed.

Mr. HAROLD J. STILES (Edinburgh) continued the discussion. As to the diagnosis he pointed out that there are two doubtful groups of cases. Benign tumours may be mistaken for malignant growths and malignant tumour may be thought to be benign. In doubtful cases the nitric acid method is of very definite value. A slice of the growth is soaked for a few minutes in a 5 per cent. solution of nitric acid and then the epithelial elements will have become opaque and the connective tissue will have become gelatinous. The malignant growth that is most likely to be missed is a small atrophic scirrhus situated immediately behind the nipple. Sometimes carcinoma occurs in the form of scattered and almost disconnected nodules and then it is very liable to be mistaken for a mastitis. As to colloid carcinoma, he would like to express a doubt as to whether it is always necessary to do the radical operation. He believed that the colloid form is not so malignant as other forms of carcinoma. True sarcoma of the breast, in his opinion, does not require the clearing of the axilla, but it is often only diagnosable by microscopic section. If any doubt exists it is better to perform the radical operation. The minimum radical operation is this: a large skin incision, wider removal of the deep fascia, removal of both pectorals, but the clavicular portion of the pectoralis major may be left; and removal, as recommended by Sampson Handley, of the fat and fascia of the epigastric triangle. The axilla must always be regarded as already affected, whether anything can be felt or not, and the axilla must be cleared from the apex downwards. At the present time the mortality from the operation itself is less than 2 per cent. and 40 to 50 per cent. are permanently rid of the disease. As to the technique of the operation, it is important that the skin should be disinfected over a very wide area. Chloroform is far preferable as the anæsthetic, for with it the bleeding is only half as great as if ether is employed. In clearing the axilla the subscapular vessels should be completely removed, but the long subscapular nerve can generally be left, and an attempt should be made to save the posterior thoracic nerve. It is necessary to remove the pectoralis minor in order to clear fully the apex of the axilla. If students were taught to dissect the axilla in this way and not from below upwards it would be better. It is not necessary to remove the supraclavicular glands as a matter of routine. Lastly, as to ulceration; if possible the operation should be done in two stages. At the first only the diseased skin and the breast should be removed, and the second operation should be performed a fortnight later, and then the complete radical operation should be done.

Professor J. RUTHERFORD MORISON (Newcastle-on-Tyne) considered that deep abscesses and cysts are the most difficult to diagnose from carcinoma. The malignant growths which resemble acute inflammatory conditions are hopeless from the beginning and should not be touched. If it is necessary to do anything above the clavicle the posterior triangle should be cleared out, the sterno-mastoid muscle should be divided, and all the glands beneath it and around the internal jugular vein must be removed. Of the 115 cases on which he had operated up to three years ago 31 are now alive, and in none of them is there any lack of mobility of the arm. In young women it is important to remove the ovaries, for pregnancy is very likely to lead to recurrence. Local x ray treatment should be continued for some months after the operation in order to prevent recurrence. The details of the 115 cases were then given.

Mr. J. LYNN THOMAS, C.B. (Cardiff), mentioned that 21 years ago he had removed a cancer of the breast by the less wide operation then in vogue and the patient is still well. In another recent case he had operated with the present extensive method and within six months both general and local recurrence had occurred. It is certain that x rays can remove some recurrent nodules. The modern operation does not prevent intrathoracic recurrences. To fix the arm in the abducted position the arm is fixed to the head by a spica. The vitality of an extensive skin flap is enhanced by making a number of punctures through it and suturing it to the intercostal muscles. He spoke highly of ether as an anæsthetic when it is administered by the open method, and if well given the hæmorrhage is very little more than with chloroform and the risk is much less.

Mr. EDRED CORNER (London) agreed that the operation of removal of the breast has within recent years made great progress but diagnosis has hardly progressed at all. Most medical men would say that when a patient has once had a cancer it is very rare for that patient to die from any other disease. Our hope of saving patients in the future lies mainly in our powers of recognising cancer early. All the ordinary clinical signs appear too late. It is important to bear in mind that if carcinoma is superficial it will show itself early but if it is deep it will be late before any signs appear. If the tumour is in the outer half of the breast its extension will occur towards the axilla and therefore the ordinary clinical characters will occur late. Therefore all masses in the outer segment should be viewed with especial suspicion.

Mr. T. CRISP ENGLISH (London) complained that students are taught the late signs of carcinoma, and therefore they are often unable to recognise early signs. Further progress depends on early recognition and the earliest sign is loss of mobility of the skin over the growth. A slight flattening of the outline of the breast is also valuable as a sign but it is not quite so early. The diagnosis is especially difficult in girls and in young women. He had one case in which the patient was only 20 years of age and another case in which the patient was 24 years old. As to the operation, the most complete is the best, but there is no need to remove the clavicular portion of the pectoralis major. In early cases a wide operation is especially useful. Hæmorrhage must be kept at a minimum and vessels should be secured before division if possible. He was opposed to the open ether method. The supraclavicular glands should be cleared in every instance as they are a frequent cause of failure.

Mr. CHARLES RYALL (London) always removes the sternal portion of the pectoralis major and the fascia towards the umbilicus, but he does not as a matter of routine remove the pectoralis minor, for it is no hindrance to the clearing of the axilla. The posterior triangle need not be cleared unless it is involved. The arm is placed at a right angle on a pillow. Post operative œdema is usually due to the cicatrix and post operative pain is due to involvement of the intercosto-humeral nerve.

Mr. W. SAMPSON HANDLEY (London) advised that a pelvic examination should be made in all cases before operation, as recurrence is not uncommon there owing to cancer cells falling from the epigastrium into the pelvis. He could not agree that points of technique were the most important; questions of pathology must be the ruling factors. An

extensive operation is not necessarily sound, and the removal of skin has been pushed too far; but extensive removal of the fascia is needed, as cancer spreads along the fascia. Halstead's operation is unsound, for in it there is no undermining of flaps. The growth spreads by "permeation" and not by embolism, and therefore the growth must be the centre of the operation. This is the reason of the unfavourable results of operations on peripheral scirrhus. The clavicular part of the pectoralis major may safely be left unless the growth is high up in the breast; the serratus magnus is more dangerous. He keeps the arm bound to the side for a fortnight after the operation and then he orders massage. He employs x rays after the operation as a prophylactic, but their use should not be prolonged.

Mr. WILLMOTT H. EVANS (London) emphasised three points. The risks of infection of healthy tissues by an exploratory incision of a growth in the breast are so great that it should never be employed. If necessary the growth may be removed and then examined. If by any accident the growth is incised the instruments must be resterilised. The axillary incision should be carried, not across the axilla at any level but high up on the shoulder about one inch in front of the tip of the acromion process. The skin in this situation is much more easily sterilised than is the axillary skin and the resulting scar has no tendency to draw the arm to the side. Lastly, as to the position of the arm after the operation; it is quite unnecessary to fix it at all. If the axilla be bandaged carefully the patient may be allowed to put the arm in any position she likes and the functional results are practically perfect.

Mr. KEITH W. MONSARRAT (Liverpool) laid stress on the early diagnosis. The disease seems to appear earlier than formerly. In 8·3 per cent. of the cases the patients were under 30 years of age, and in 25 per cent. of the cases they were under the age of 40. In doubtful cases he removes a portion of the growth two or three days before the operation. The position of the primary recurrence shows where the operation has failed. The extent of the disease must govern the extent of the operation, for there can be no standard operation. In two cases in which the disease recurred in the axilla the pectoral muscles had not been removed.

Mr. DOUGLAS DREW (London) looked upon colloid carcinoma as quite as malignant as ordinary scirrhus. In the radical operation both pectorals should be removed; the removal of the pectoralis minor does not increase the severity of the operation, and it enables the axilla to be throughly cleared. He was in favour of fixing the arm to the side for the first week.

Dr. ROBERT BELL (London) had had 17 years' experience of removal of the breast for cancer and he had never seen a case in which recurrence had not occurred. He considered recurrence inevitable and therefore he opposed all operation. He believed cancer to be curable by other means.

Dr. J. CRAWFORD RENTON (Glasgow) considered the exploration of a doubtful tumour wise and fair. The mortality of the radical cure is small and since 1900 he has had no fatal case as an immediate result of the operation, though in one recurrent case the patient died five days after the operation. He was in favour of the complete operation.

Professor J. B. MURPHY (Chicago) claimed that all surgeons were agreed on vital points. As to the anæsthetic, he was strongly in favour of ether given by the open method, but it must be given by someone skilled in its use. He had never seen a death under anæsthetics. In one case a patient had had chloroform, and he had done artificial respiration for three hours and a quarter and the patient had recovered; but that experience had prevented him ever using chloroform again. Induction with ether by the open method rarely takes more than three minutes.

Mr. JORDAN LLOYD (Birmingham) thought that many cases of cancer of the breast were better left untouched. The results of operations have caused women greatly to fear the operation for removal and so the cases are seen later than would otherwise be the case. Œdematous carcinoma should never be touched. He claimed that hardness is not typical of carcinoma, for cysts are often very hard.

Mr. STILES replied, and pointed out that the results of the radical operation were improving and pathology was responsible for this improvement.

Mr. CHARLES RYALL (London) read a paper on

The Technique of Cancer Operations, with reference to the Danger of Cancer Infection.

He said that cancer is a spreading infective process, not unlike other infective processes. The cancer cell within the body is possessed of independent existence: it contains the elements of infection and it can give rise to fresh cancerous outbreak in any part of the body, whether it is carried by the lymph or blood stream, just as wandering bacteria are capable of forming secondary infective foci. There are various types of cancer infection: (*a*) contact infection, as in the peritoneum; (*b*) distant implantation, as in the pelvic peritoneum from cancer cells dropped from growths in the upper abdomen; (*c*) operation infection, as in suture scar infection, nodular infection of the wound, brawny infection of the wound, and distant implantations as sometimes seen in laparotomy wounds. Therefore the operations must be so planned and performed as to render infection as little likely as possible. If an exploratory incision has been performed the whole of the instruments and towels must be sterilised and the surgeon's and assistant's hands also.

OBSTETRICS AND GYNÆCOLOGY.

WEDNESDAY, JULY 29TH.

After a few remarks by the President (Mr. RICHARD FAVELL),

Dr. G. E. HERMAN (London) opened a discussion on

The Treatment of Uterine Displacements.

He said that the common uterine displacement was descent and this was due to injury or weakness of the pelvic floor of which the uterus was the central part. In not more than one case in ten falling backward of the uterus led to pressure upon the veins, congestion of the uterine body, with pain and tenderness in consequence. In most the essential treatment was to push or pull up the uterus. This was most easily done by a vaginal pessary. But often the injury to the pelvic floor that caused the descent of the uterus so enlarged the vaginal orifice that a vaginal pessary was not retained. In such cases the simplest treatment was a vaginal support attached to a waist-belt. Most patients were content with a mechanical support which was free from risk. But when the body of the uterus was tender no vaginal support could be borne that did not keep the uterus in the axis of the pelvic inlet. In such cases shortening of the round ligaments, either by the inguinal or vaginal methods, and vaginal fixation of the uterus were effective. But if the symptoms were due to descent these operations were useless. Their only effect was that instead of the uterus coming down leaning back it came down leaning forward. There were cases in which pushing up the uterus from below was not effective. If the uterus were tender it could not be tolerated and if the vaginal orifice were very large the lower part of the vagina became inverted and might protrude by the side of the pessary, even though the uterus were at its normal level. In these cases ventral fixation combined with extensive colporrhaphy was the best treatment. If ventral fixation alone were done the vaginal orifice remaining, large inversion of the lower part of the vagina might still take place, and if the patient still had an uncomfortable protrusion the precise nature of the procident mass was to her unimportant. If the only thing done were to contract the lower part of the vagina by colporrhaphy, although the patient might for a time seem cured, yet an inversion of the upper part of the vagina would allow descent of the uterus to take place and this would in time bulge open the contracted vaginal orifice. By colporrhaphy the patient might be enabled to retain a vaginal pessary. But if she were to undergo the risk and discomfort inseparable from any operative measure the operative cure should be as complete as possible, and therefore it was better to perform ventral fixation at the same time as colporrhaphy. Colporrhaphy if extensive would lead to difficulty in delivery should the patient become pregnant, and therefore it should be postponed until the risk of pregnancy was over. A young subject of prolapse might be made able to retain a vaginal pessary by extending the perineum forward without loss of tissue. Hysterectomy would not cure prolapse because the uterus was only a part of the procident mass. But in old widows prolapse could be

cured by removal of the uterus and vagina. Operations had been proposed to cure prolapse by repairing the levator ani and pelvic fascia. Dr. Herman regarded these as sound in principle.

A very full discussion followed, in which Professor S. POZZI (Paris), Professor C. M. BOSSI (Genoa), Dr. REDDLE GOFF (New York), Dr. MAY THORNE (London), Dr. J. B. HELLIER (Leeds), Dr. INGLIS PARSONS (London), Dr. A. W. LEA (Manchester), Dr. A. DONALD (London), Dr. CUTHBERT LOCKYER (London), Dr. T. A. HELME (Manchester), Dr. H. ROBERTS (London), and Dr. F. J. MCCANN (London), took part. Dr. HERMAN replied. Considerations of space compel us to hold over this important discussion until a future issue.

PUBLIC HEALTH AND FORENSIC MEDICINE.

WEDNESDAY, JULY 29TH.

Professor HARVEY LITTLEJOHN (Edinburgh) presided over a large attendance of members. In his opening address he said that in Sheffield more than elsewhere the work of a medical officer of health presented a great amount of variety and the problems to be dealt with were of an unusually fascinating character. Amongst the factors which lent a special interest to the public health administration in that town he mentioned first of all the people themselves, their strong individuality characterised by shrewdness and sound common sense, an outspoken frankness, and no inconsiderable amount of humour, and though strongly conservative in all questions affecting sanitation they were quite open to argument and when once convinced were loyal in their conversion. He considered that no inconsiderable part of what a public health officer was able to accomplish depended more upon his own personal qualities and those of the community he had to deal with than upon his own scientific attainments and the force of legislative enactments. A circumstance of great importance and intimately associated with the public health administration of Sheffield was its rapid and enormous growth which had transformed in less than a century a town of scarcely 50,000 to the position of the seventh largest city in the United Kingdom, with a population of 450,000. Such a rapid increase of a community left an imprint on a town of a more or less permanent character and was attended by evils which were difficult to eradicate. In Sheffield it accounted for the narrowness of many of the streets and their unimportant character, together with, in many quarters, the poor nature of the houses and their surroundings. The city could not keep pace with the vast flow of men and women to its workshops in the halcyon days of unlimited work and high wages. Houses had to be erected somewhere and somehow, new streets had to be laid out without too much regard to drainage and paving, so that one of the most difficult problems to-day were in connexion with such property and the requirements of modern sanitation. To remedy such conditions had entailed great energy and public spirit on the part of the city council and the expenditure of a very large amount of money. The nature and multiplicity of Sheffield's industries were of great practical interest to the sanitarian. They cover almost every kind of worker in the iron and steel trade, including steel grinders, cutlers, tool, fork, and scissor forgers, file-cutters, engineers, fitters, turners, wire-rollers, silver-platers, and coal-miners. The conditions of work of these persons had to be studied in relation to their work-places, while the diseases from which they suffered had to be investigated with reference to their occupational mortality. In conclusion, Professor Littlejohn referred to the death of Sir Thomas Stevenson, a former President of the Public Health Section, who was not alone distinguished in the department of public health as an analytical chemist but was unquestionably the foremost toxicologist of this country.

Dr. H. A. DES VŒUX (London) opened a discussion upon Smoke Abatement, in which he dealt with the way in which Sheffield had approached the problem. An interesting discussion followed, in which several Sheffield manufacturers took part.

ANATOMY.

WEDNESDAY, JULY 29TH.

The PRESIDENT (Dr. C. ADDISON, London) delivered a short address upon the Teaching of Anatomy, and then called upon Dr. D. WATERSTON (Edinburgh) to open a discussion on

Teaching and Examination in Anatomy.

This was continued by Professor A. ROBINSON (Birmingham), Professor A. KEITH (London), Dr. T. H. BRYCE (Glasgow), Professor C. J. PATTEN (Sheffield), Professor G. ELLIOT SMITH (Cairo), Dr. R. K. HOWAT (Middlesbrough), Professor J. SYMINGTON (Belfast), Mr. E. SKINNER (Sheffield), and the PRESIDENT. Interesting and varied views on the question were expressed by the speakers.

Professor ARTHUR KEITH next opened a discussion on

The Mechanism of Respiration in Health and Disease

with an address which included many important observations and which he illustrated by models and diagrams. He contended especially (1) that the lung is not equally expansile throughout; (2) that the infundibula expand more completely than the alveoli; (3) that the bronchial musculature acts as a stop-block to this expansion; and (4) that expiration is a muscular act and not a pure recoil.

The paper evoked a brisk discussion, in which Dr. D. LAWSON (Banchory), Dr. J. F. H. DALLY (London), Dr. F. O'B. ELLISON (Dublin), Dr. WATERSTON, Professor SYMINGTON, Professor PATTEN, Professor ROBINSON, and Dr. A. C. GEDDES (Edinburgh) took part.

An exhibition of specimens was held subsequently in the anatomical laboratory of the University.

DISEASES OF CHILDREN.

WEDNESDAY, JULY 29TH.

The section met under the presidency of Dr. CHARLES HENRY WILLEY (Sheffield).

Mr. A. H. TUBBY (London) introduced a discussion on

The Treatment of Infantile Paralysis

with an able and comprehensive review of recent methods and their results. Mr. J. JACKSON CLARKE (London), Dr. WILFRED HARRIS (London), Mr. LAMING EVANS (London), Mr. H. A. T. FAIRBANK (London), Mr. W. THOMAS (Birmingham), and Dr. C. L. STARR (Toronto) contributed to the consideration of the subject.—Mr. JACKSON CLARKE read a paper on Some Practical Points in the Treatment of Spinal Tuberculosis.—The meeting was concluded with papers by Dr. WILFRED HARRIS on Neuritis in Volkmann's Contracture and by Mr. H. T. GRAY (London) on Cases of Hernia in which Meckel's Diverticulum was Present.

DENTAL SURGERY.

WEDNESDAY, JULY 29TH.

Mr. F. HARRISON (London) presided over a well-attended section. In his address of greeting he referred to the dental inspection of school children and the good that will result from it.

Mr. HERBERT TILLEY (London) then opened a discussion on

Antral Disease in its Relation to General and Special Surgery.

He was followed by Mr. A. S. UNDERWOOD (London), Mr. KENNETH GOADBY (London), Dr. URBAN PRITCHARD (London), Mr. W. STUART-LOW (London), Mr. C. E. WALLIS (London), Dr. W. HILL (London), Dr. J. DUNDAS GRANT (London), Mr. F. J. BENNETT (London), and others.

DERMATOLOGY.

WEDNESDAY, JULY 29TH.

After the PRESIDENT (Dr. E. G. GRAHAM LITTLE, London) had introduced several distinguished foreign visitors Dr. R. SABOURAUD (Paris) delivered an important address on the subject of Diseases of the Skin in Animals communicable to Man, and was followed by Dr. LESLIE ROBERTS (Liverpool), who read a paper on the same subject, but treating of different diseases. Dr. T. COLCOTT FOX (London), Dr. GILCHRIST (Baltimore), and Dr. J. L. BUNCH (London) joined in the subsequent discussion, and Dr. SABOURAUD replied to their questions.

Dr. LEWIS JONES (London) read a paper and showed experiments on Ionic Medication with Special Reference to Skin Diseases. A discussion followed, in which the following gentlemen took part:—Dr. J. H. SEQUEIRA (London), Dr. FREDERICK GARDINER (Edinburgh), Dr. GOODWIN TOMKINSON (Glasgow), Dr. LESLIE ROBERTS (Liverpool), Mr. G. PERNET (London), Dr. T. D. SAVILL (London), and Dr. J. PRINGLE (London).

Dr. H. NOIRÉ (Paris) then addressed the section on the Treatment of Hypertrichosis.

Dr. SEQUEIRA read a paper on the Calmette Reaction in Tuberculosis, and remarks on the subject were made by Dr. H. T. C. WOODCOCK (Leeds), Mr. PERNET, and Dr. A. D. HEATH (Birmingham).

ELECTRICAL MEDICINE.

WEDNESDAY, JULY 29TH.

THE meeting was held under the presidency of Dr. REGINALD MORTON (London) who opened the proceedings with a short address on

Tele-radiography in Diagnosis.

The value of the method was very obvious from an examination of the lantern-slides which were shown in illustration of the points brought out in the address.

Dr. C. LESTE LEONARD (Philadelphia, U.S.A.) then opened a discussion on

The Value of Instantaneous Radiography in the Diagnosis of Early Tuberculosis of the Lung.

Some very excellent slides were shown. A brisk discussion followed in which Dr. G. H. ORTON (London), Dr. J. F. H. DALLY (London), Dr. J. E. SQUIRE (London), Dr. C. T. HOLLAND (Liverpool), and Dr. A. S. GREEN (Lincoln), took part.

Dr. ORTON then read a paper on

Some Fallacies in the X Ray Diagnosis of Renal and Ureteral Calculi and how these may possibly be avoided,

which was illustrated by many excellent radiographs.

INDUSTRIAL DISEASES.

WEDNESDAY, JULY 29TH.

IN the unavoidable absence of the President, Dr. T. OLIVER of Newcastle-on-Tyne, the chair was taken by Mr. W. F. DEARDEN (Manchester), one of the Vice-Presidents of the section. Mr. Dearden, after expressing regret at the absence of the President and referring to the importance of industrial diseases in a centre like Sheffield, introduced Dr. KING ALCOCK (Burslem), who read a paper on

Granting Certificates of Fitness for the Employment of Children in Factories.

Dr. T. F. YOUNG (Liverpool), Dr. ALEXANDER SCOTT (Glasgow), Dr. PROSSER WHITE (Wigan), Dr. R. H. CROWLEY (Bradford), Dr. J. A. W. WATTS (Hyde), Dr. R. W. EDGINGTON (Birmingham), Dr. RALPH WILLIAMS (Sheffield), Dr. T. M. LEGGE (London), Mr. S. BENNETT (Sheffield), and Mr. DEARDEN spoke on the paper.

Dr. F. SHUFFLEBOTHAM (Newcastle-under-Lyme), read a paper on

Industrial Dermatitis,

in which many skin lesions originating in employment were described and in which he pointed out the altered conditions which had arisen under the Employers' Liability Act.

The meeting was concluded with a discussion of the paper.

LARYNGOLOGY, OTOLOGY, AND RHINOLOGY.

WEDNESDAY, JULY 29TH.

The President, Mr. GEORGE WILKINSON, B.C., F.R.C.S. (Sheffield), in a brief introductory address referred to the important work there was to be done in their department of practice in connexion with the medical inspection of school children and advocated the uniformity of method of investigating hearing power with a view of obtaining reliable and useful statistics.

Dr. P. MCBRIDE (Edinburgh) and Dr. J. B. BALL (London) then opened a discussion on

The Treatment of Chronic Inflammatory Conditions of the Pharynx.

in which the following joined: Mr. T. MARK HOVELL (London), Dr. R. H. SCANES SPICER (London), Dr. J. DUNDAS GRANT (London), Dr. WATSON WILLIAMS (Bristol), Dr. ATWOOD THORNE (London), Dr. KNOWLES RENSHAW (Manchester), Dr. T. G. OUSTON (Newcastle-on-Tyne), Dr. A. WYLIE (London), Dr. N. C. HARDING (Manchester), and Dr. JOBSON HORNE (London).

A paper by Dr. J. H. NEIL (New Zealand) on Some Points on the Anatomy and Surgery of the Tonsils, illustrated by stereo-photographs, was read, in the absence of the author, by the SECRETARY. Dr. A. WYLIE (London) read a paper on a Case of Cervical Tumour simulating Enlarged Glands associated with Laryngeal Paralysis. Dr. A. BROWN KELLY read a paper on Some Experiences in Direct Examination of the Larynx, Trachea, and Œsophagus.

Dr. E. B. WAGGETT (London) gave a demonstration on the Methods of Direct Laryngoscopy, Bronchoscopy, and Œsophagoscopy, and Mr. THOMAS GUTHRIE (Liverpool) demonstrated preparations showing the Development of the Middle Ear.

NAVY, ARMY, AND AMBULANCE.

WEDNESDAY, JULY 29TH.

The session was opened with a short address from Lieutenant-Colonel E. M. WILSON, C.B., C.M.G., D.S.O., the President of the section.

The first paper read was by Lieutenant-Colonel A. M. DAVIES, professor of hygiene at the Royal Army Medical College, on the Influence of Alcohol in the Services.

The next paper was by Major R. J. BLACKHAM, R.A.M.C., on the Feeding of the Soldier in Barracks, Hospital, and War; in the absence of Major G. S. CRAWFORD, R.A.M.C., his paper on Alcohol as a Cause of Inefficiency in the Army was read by one of the honorary secretaries of the section. The concluding paper was by Captain W. V. SINCLAIR, R.A.M.C., on the Importance of Teaching Trades in the Army.

OPHTHALMOLOGY.

WEDNESDAY, JULY 29TH.

After a few remarks by the President, Sir HENRY R. SWANZY (Dublin), Dr. LOGAN TURNER (Glasgow) opened a discussion on

The Relation of Disease of the Nasal Accessory Sinuses to Disease of the Eye

with an exhaustive anatomical disquisition on the relations of the orbit to these upper air sinuses. He showed that the orbit was surrounded by them except in front and to the outer side; that the sinuses were variable in extent and position; and that the sinuses were in intimate relation to the optic and oculo-motor nerves.

Dr. G. MACKAY (Glasgow) then considered the conditions that arise from disease of these sinuses and insisted on the importance of examination of the sinuses in both bulbar and retro-bulbar disease.

Dr. STCLAIR THOMSON (London) and Mr. SYDNEY STEPHENSON (London) continued with papers on the Symptoms of Thrombosis of the Cavernous Sinus, and Dr. W. SYME (Glasgow), Dr. ARTHUR GREENE (Norwich), Professor T. AXENFELD (Freiburg), Dr. A. BRONNER (Bradford), Professor E. FUCHS (Vienna), and Dr. WATSON WILLIAMS (Bristol) contributed to the discussion.

Professor FUCHS read a paper on the Causation of Glaucoma subsequent to Leucoma Adherens, a paper that elicited considerable discussion.

Dr. INGLIS POLLACK (Glasgow) read a paper on Monocular Diplopia.

PATHOLOGY.

WEDNESDAY, JULY 29TH.

The Pathology section was held in the lecture theatre of the Pathological Department of the University of Sheffield under the Presidency of Dr. C. J. MARTIN (Lister Institute,

London), who opened the proceedings at 10 A.M. He welcomed warmly the many distinguished foreign workers present. He also briefly explained the reasons that had led the committee of the Pathology Section to select the two subjects "Cerebro-spinal Meningitis" and "Regenerative and Compensatory Changes in the Liver" for consideration and then called upon Professor W. ST. CLAIR SYMMERS (Belfast) to open the discussion on Cerebro-spinal Meningitis, which he did by summarising the various points in the etiology, bacteriology, and serum treatment of the epidemic form of meningitis, referring incidentally to forms of meningitis due to bacteria other than the meningococcus. Professor Symmers was followed by Dr. EMMETT HOLT (New York) who dealt with the clinical employment of the anti-meningococcic serum of Flexner and Jobbling and the results achieved by its use; Professor W. KOLLE (Berne, Switzerland) who described the methods of preparing and standardising the Kolle-Wassermann serum; Dr. C. B. KER (Edinburgh), Dr. F. E. BATTEN (London), Dr. T. HOUSTON (Belfast), and Dr. J. C. RANKIN (Belfast), Dr. GARDNER ROBB (Belfast), Dr. STUART MACDONALD (Edinburgh), Dr. J. A. ARKWRIGHT (London), and Dr. W. T. RITCHIE (Edinburgh). As at 1 P.M. the discussion was not finished the meeting was adjourned until the following morning.

PHYSIOLOGY.

WEDNESDAY, JULY 29TH.

This section met under the presidency of Professor E. H. STARLING (London). It occupied itself with a discussion upon the Physiology of Purine Metabolism which was opened by Dr. J. B. LEATHES (London). He considered the excretion of uric acid in its relation to diet, muscular activity, external temperature, and general health, and the significance of this product in metabolism in reference to its rate of excretion and its tendency to accumulate in the organism. The following gentlemen took part in the discussion: Professor A. R. CUSHNY (London), Professor I. WALKER HALL (Bristol), Dr. F. G. HOPKINS (Cambridge), Dr. A. P. LUFF (London), Dr. GUSTAV MANN, and Professor T. MILROY (Belfast).

PSYCHOLOGICAL MEDICINE.

WEDNESDAY, JULY 29TH.

This section was opened by a few words of welcome from the President, Dr. W. S. KAY (Wadsley).

The morning's discussion was opened by Dr. T. CLAYE SHAW (London), who read a paper on

The Question of the Treatment of the Habitual Drunkard, Legislative and Otherwise.

He entered into the definition of the term "habitual drunkard," and was willing to substitute for it the modern term "inebriate." He referred to the difficulty in managing those cases not certifiably insane but who yet required compulsory restraint. He suggested the legal processes that should be invoked. He mentioned the work of the Departmental Committee now sitting, and was anxious that a resolution should be passed imparting to that committee the views held by the section. This was followed by a paper by Commander C. T. SCOTT, Chief Constable of Sheffield (read by one of the Honorary Secretaries), pointing out the inadequacy of the Habitual Drunkards Act, 1879, and the Inebriates Act, 1898.—Mr. J. STEWART (late of Clifton), Dr. WARD COUSINS (Portsmouth), Dr. J. S. BOLTON (Nottingham), Dr. T. N. KELYNACK (London), Dr. J. A. DONALD (Fife), Dr. H. G. SHORE (Newquay), Dr. F. E. WYNNE (Leigh), Dr. BEDFORD PIERCE (York), and Mr. G. E. MOULD (Sheffield) took part in the discussion, after which Dr. CLAYE SHAW replied and proposed the following motion, which was seconded by Mr. J. STEWART and carried unanimously:—

That the members of the Section of Psychological Medicine of the British Medical Association are of opinion that the time has now arrived when legislation for the compulsory detention of inebriates in retreats, homes, or other licensed houses is urgently required in the interests both of the patient, of his family, and of society in general.

The Section desires to present this resolution to the Council of the Association with the view to its being adopted and forwarded to the Departmental Committee on the Inebriates Acts now in session.

Dr. A. T. SCHOFIELD (London) read a paper on

The Psychology of Neurasthenia and Hysteria,

which was discussed by Dr. H. G. SHORE (Newquay) and Dr. T. CLAYE SHAW, and after Dr. SCHOFIELD'S reply the section adjourned.

TROPICAL DISEASES.

WEDNESDAY, JULY 29TH.

The President, Lieutenant-Colonel Sir R. HAVELOCK CHARLES, K.C.V.O., I.M.S., opened a discussion on

Tropical Abscess of the Liver,

which was followed by the following papers: (1) Dysentery with Intestinal Amœbæ, but without Hepatic Abscesses, by Major A. R. S. ANDERSON, I.M.S.; (2) Intestinal Amœbiasis, by Dr. C. M. WENYON, protozoologist to the London School of Tropical Medicine; (3) Tropical or Amœbic Abscess of the Liver as an Easily Preventable Disease and Post-operative Sepsis as an Important Lethal Factor, with a Suggestion for its Prevention, by Major LEONARD ROGERS, I.M.S. (Calcutta); (4) Is Dysentery the Sole Cause of the Tropical Abscess of the Liver, by Rai Dr. KOELAS CH. BOSE BAHADUR, C.I.E.; and (5) the Treatment of Abscess of the Liver by Aspiration and Injection, by Major A. HOOTON, I.M.S.

The following gentlemen joined in the discussion: Sir PATRICK MANSON, K.C.M.G. (London), Dr. L. W. SAMBON (London), Dr. F. M. SANDWITH (London), Dr. J. L. MAXWELL (Bromley), Dr. A. POWELL (Minster), Dr. F. BUTCHER (Chesham), and others. The section was well attended, about 40 being present.

THE ANNUAL EXHIBITION.

THE exhibition, held in the Drill Hall, was evidently in a somewhat congested state. There was plenty to see and to study but there was not much room to move freely up and down the avenues which separated the stalls. The "traffic" indeed was at times "blocked." There can be little doubt that in the minds of many exhibitors Sheffield offered a good opportunity for bringing the latest developments in the direction of drugs, special foods, surgical appliances, and so forth, to the notice of the medical profession, and a big attendance was anticipated. The result was a large demand for stall space and the accommodation of the promenading avenues was to some extent sacrificed. The all-round interest of the exhibits, however, proved to be a compensation and there were moments when the annual exhibition was obviously the centre of a very busy and animated scene, such as must have appealed to the business instincts of the exhibitor.

In bringing before the notice of our readers the more important exhibits it is convenient to classify them in the following order: (1) Surgical Instruments and Appliances; (2) Drugs; (3) Foods and Food Products; (4) Sanitary Appliances; (5) Mineral Waters, Beverages, &c.; (6) Publications; and (7) Exhibits of a Miscellaneous Character.

I.—SURGICAL APPLIANCES

One of the principal features of this section of the exhibition this year was the attention given to electrical apparatus. There was the usual display of up-to-date instruments for the surgeon's delectation but x ray apparatus, high-frequency apparatus, induction coils, new switchboards, contact breakers, and so forth were considerably in evidence. A very attractive show in this connexion was that of Messrs. Siemens Brothers and Co., Limited, of Queen Anne's Chambers, Broadway, Westminster, London, S.W., who exhibited many forms of electro-medical apparatus of an up-to-date description. There were complete x ray outfits, including one in a cabinet for working direct from the alternating current; there were also a mercury vapour lamp, tantalum terminal x-ray tubes which have distinct advantages over the platinum terminals, fluorescent screens, a new iris diaphragm, and so forth. One of the largest exhibits of electrical apparatus was that of Messrs. Newton and Co., the well-known scientific instrument makers of 3, Fleet-street, London, E.C. Here was shown the Apps-Newton heavy discharge coil for very rapid x ray exposures, working with either a mercury or electrolytic interrupter in connexion with a change-over switchboard of a specially effective design.

They exhibited also the "Vita" interrupter, a new type of mercury break believed by them to be the most efficient pattern so far introduced. There were apparatus adapted for both private practice and for hospital use. Messrs. Isenthal and Co., of 85, Mortimer-street, Cavendish-square, London, W., showed some cleverly designed switchboards, amongst which was a portable universal one for galvanisation, electrolysis, cataphoresis, faradisation, galvano-faradisation, cautery, and surgical lamps. The exhibit included an ingluvin rotary apparatus designed for producing slow alternations and impulses for diagnostic purposes. Messrs. Harry W. Cox and Co., Limited, of 47, Gray's Inn-road, London, W.C., and formerly of Rosebery-avenue, London, were to the front again with their excellent apparatus for x ray work. They showed, amongst other things, a new interrupter consisting of a "trough break," which is arranged for gas or paraffin as a dialectric, and which has no tendency to clog, as the outlet for the mercury is much larger than can be used in the ordinary jet interrupter. They exhibited also a new electrolytic interrupter for instantaneous radiography and besides an improved tube-holder and shield for the treatment of ringworm and so forth.

A new interrupter, described as "the best ever invented," was the principal exhibit of the Sanitas Electrical Company, Limited, of 61, New Cavendish-street, London, W. For the "Sanax" interrupter, as it is called, it is claimed that there are "no jets, no pumps, no hammers, no magnets, no paddles, no dippers, no contact brushes," and, in fact, that it is without the drawbacks of the previous mercury and electrolytic interrupters and does not introduce any drawbacks peculiar to itself. The exhibit included also a "Sanax protecting box" which is designed for protecting both operator and patient from the injurious effects of the x rays. There were besides a number of useful x-ray accessories, and examples of Finsen lamps, vibrators, switchboards, transformers, and so on.

The Medical Supply Association, of 228 and 230, Gray's Inn-road, London, W.C., exhibited, besides some interesting and up-to-date examples of operating room and hospital furniture, sterilisers, and surgical instruments, the Rochefort Gaiffe induction apparatus, which is regarded as superseding the ordinary Rhumkorff induction coil for convenience and efficiency. An excellent collection of up-to-date surgical instruments and appliances was that presented to view by Messrs. Down Brothers, Limited, of 21, St. Thomas's-street, Borough, London, S.E., and the same firm fitted up a house opposite to the University with aseptic hospital furniture and all the aseptic accessories now inseparable from the operating-room. Mr. T. P. Hawksley, of 357, Oxford-street, London, W., submitted examples of blood-pressure apparatus; the sphygmomanometers of several well-known inventors, including Mr. Lockhart Mummery, Dr. C. J. Martin, Dr. Janeway, Professor Sahli, Professor Potain, Von Busch, and Dr. Erlanger; the new hæmometer of Dr. George Oliver; and a clinical polygraph by Dr. G. A. Gibson, an apparatus for bedside use which records in ink the movements of various organs simultaneously. The exhibit included apparatus for the examination of the blood and an assortment of surgical instruments and antiphones which deaden sound and are useful in insomnia and in excluding intolerable noises. Besides pharmaceutical preparations, to which we shall refer later, Messrs. Reynolds and Branson, Limited, of 13, Briggate, Leeds, exhibited a number of medical requisites, including aprons and sleeves, useful in midwifery, ligatures, anæsthetic apparatus, intestinal forceps, tubes, stomach clamps, and orthopædic appliances. There was also an interesting series of apparatus facilitating the analysis of urine for sugar, urea, uric acid, and so on. Messrs. John and Joseph Taunton, Limited, of Belgrave Works, Sherbourne-road, Birmingham, showed examples of their improved "Diagna" antisagging spring mesh bedstead which it is stated has been proved to be 37 per cent. stronger than any other mesh obtainable. The military bedstead, the tramp bedstead, and the Chatham spring bedstead for surgical wards deserve mention also. The Bruce's safety parabolic reflector lamp shown by Messrs. F. and J. Bruce of 232, Borough High-street, London, S.E., will appeal in particular to medical practitioners in the country where neither gas nor electric lighting is available. It gives a splendid light with ordinary lamp oil and is adapted for throat and ear examination. Mr. G. H. Zeal of 82, Turnmill-street, London, E.C., exhibited specimens of the now well-known "repello" clinical thermometer, which can be reset without shaking. There was also an aseptic clinical thermometer fitting into a container like a stoppered bottle, which is, morever, liquid-tight and keeps the thermometer in contact with the antiseptic. Many descriptions of bedsteds for hospital use, including the Lawson Tait spring bedsteads for surgical and medical cases, as well as examples of aseptic hospital furniture were shown by Messrs. George Gale and Sons, Limited, of Dominion Works, Birmingham. A cupping instrument for the cervix uteri, a bi-pronged forceps, and a vaginal dilating douche were amongst the surgical novelties exhibited by Messrs. C. J. Hewlett and Son, Limited, of 35–42, Charlotte-street, London, E.C.

Messrs. Seabury and Johnson, represented by Messrs. Fassett and Johnson of 31 and 32, Snow Hill, London, E.C., showed a number of appliances of great service to the surgeon. Mention may be made of their medicinal and surgical plasters in indiarubber combination, of the air-tight aseptic container for preserving intact aseptic surgical dressings and accessories, and also their official and non-official plasters. In addition they showed samples of "thermogene," an absorbent medicated wool impregnated with slightly irritant agents for provoking general counter-irritation of the skin which is a substitute for stimulating plasters. Specimens of the ingenious Marshall shadowgraph ureteric bougie, which has been used in connexion with the precise surgery of renal calculus, were shown by Messrs. Croyden and Co., Limited, of 55, Wigmore-street, London, W., together with some special catheter bougies, the important feature of which is their exceeding adaptability. Messrs. Van Horn and Sawtell of the United States and 31–33, High Holborn, London, E.C., exhibited specimens of their "catgut safety," so called because of the claims made in regard to it on the score of sterility, tensile strength, and absorbability. A miscellaneous collection of medical requisites appeared on the stall which jointly represented the firms Messrs. Browne and Sayer and Messrs. Bale, Sons, and Danielsson, both of London. They showed a "unique" operation apron which can be boiled, the Knowles-Mason gag, the Vernon-Knowles inhaler, and Bale's simple medical card-index system which is said to obviate all the tedium and trouble of bookkeeping. Messrs. John Weiss and Son, Limited, of 287, Oxford-street, London, W., showed, as might be expected of a firm with their reputation and standing, a very fine selection of up-to-date surgical instruments, including special clamps, saws, bone staples, bone and cleft palate instruments, cauteries, trephines, and so forth. Close by Messrs. C. A. Hoefftcke, of 21, Woodstock-street, London, W., caught the interest of the visitors by demonstrating the advantages of their auto-gloving machine which enables the surgical gloves to be put on without being touched on the outer surface by the hands at all. This is done by inflating the glove by means of a vacuum outside it. The glove, being thus distended, the hands are easily introduced and subsequently may be withdrawn from the apparatus with the gloves upon them. There were shown also at the same stall Hoefftcke's appliance for joint diseases, for fractures, for lateral curvature, as well as other appliances which proved of interest to many visitors. The exhibit of Messrs. Mayer and Meltzer, of 71, Great Portland-street, London, W., was bound to attract a good deal of attention since it showed well what had been achieved in providing the surgeon with efficient tools. Besides anæsthetic apparatus, ophthalmic, laryngological, nasal, and aural instruments, the selection included a portable surgical hand motor suitable for working circular saws for the skull or long bones, drills for wiring bones, or burrs for the mastoid operation. The Liverpool Lint Company of Mark-street Mills, Netherfield-road North, Liverpool, showed a useful collection of wools, lints, absorbent tissue, and bandages, all possessing various merits. Surgical instruments of approved pattern were exhibited by Messrs. Philip Harris and Co., Limited, of Edmund-street, Birmingham. Their analytical apparatus for the determination of opsonic index, for the estimation of the constituents of the urine; and, finally, the small acetylene lamp known as the Glegg lamp, which appears to be free from the defects

of ordinary acetylene lamps, are all well worthy of mention. Besides drugs and pharmaceutical products, Messrs. James Woolley, Sons, and Co., Limited, of Manchester, made a feature of the "boval" patent adjustable trusses, an improved aseptic spray, vaginal pessary, and uterine curette, and the "Iona" laminaria tents. The exhibit included a selection also of modern surgical instruments and operating tables, sterilisers, &c. Messrs. White and Wright, of 93, Renshaw-street, Liverpool, exhibited a new portable operation table which they maintain is the only table which possesses all the requirements of a portable operation table. It can be adapted to any position required by the surgeon. An interesting collection of scientific and electro-therapeutic apparatus was exhibited by Messrs. J. R. Collins and Co., of the Alliance Steam Mills, Windus-road, Stamford Hill, N. This included x ray and high-frequency outfits. Orthopædic appliances formed the feature of the stall of Mr. F. Gustave Ernst, of 80 and 82, Charlotte-street, Fitzroy-square, the exhibit comprising spinal apparatus, apparatus for congenital dislocation of the hip-joint, apparatus for paralysis, the knee-joint, genu valgum, curved tibia, flat foot, and a number of artificial limbs. The Offord Patent Hygienic Truss, Co., Limited, of Cambridge, exhibited a truss for the retention of inguinal hernia. There was also a new model of an apparatus for the prevention of lateral movement in the knee-joint and for the prevention of recurring displacement of the semilunar cartilage of the knee. It will be readily understood from the foregoing account that this section of the exhibition occupied a not inconsiderable share of the total space allotted for the purpose.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held recently the following candidates passed in the subjects indicated:—

Surgery.—A. Bernstein (Sections I. and II.), Manchester; A. J. K. Brayton (Section II.), Liverpool; J. Brierley (Section II.), St. Thomas's Hospital; F. M. Cunningham (Section II.), Royal Free Hospital; G. J. Eady (Sections I. and II.), St. Bartholomew's Hospital; J. C. Fletcher (Sections I. and II.), Royal Free Hospital; J. K. A. Helm (Sections I. and II.), Guy's Hospital; V. P. Norman (Sections I. and II.), Durham; H. W. Phillips (Section I.), Manchester; M. Rathbone (Sections I. and II.), Royal Free Hospital; and A. P. Van Ryn (Sections I. and II.), Leyden.

Medicine.—G. K. Aubrey (Section I.), King's College Hospital; T. Campbell (Sections I. and II.), Liverpool; J. Grimoldby (Sections I. and II.), St. Bartholomew's Hospital and Edinburgh; F. S. Hawks (Section II.), King's College Hospital; V. P. Norman (Sections I. and II.), Durham; E. D. Richardson (Section I.), St. Mary's Hospital; and W. G. Riley (Section I.), Edinburgh.

Forensic Medicine.—T. Campbell, Liverpool; J. Grimoldby, St. Bartholomew's Hospital and Edinburgh; V. P. Norman, Durham; W. G. Riley, Edinburgh; and A. P. Van Ryn, Leyden.

Midwifery.—J. M. Burke, Middlesex Hospital; W. J. Gibson, London Hospital; and J. Grimoldby, St. Bartholomew's Hospital and Edinburgh.

The diploma of the Society was granted to the following candidates entitling them to practise medicine, surgery, and midwifery: A. Bernstein, A. J. K. Brayton, J. Brierley, T. Campbell, F. M. Cunningham, G. J. Eady, F. S. Hawks, V. P. Norman, M. Rathbone, and A. P. Van Ryn.

UNIVERSITY OF DURHAM.—At the Convocation held on July 25th the following degrees and diploma were conferred:—

Doctor of Medicine.—Frederick William Cheese, Harold Edgar Featherstone, Archibald Finlay, William George Thomas Hepplewhite, Colin Francis Frederick McDowall, Bertha Mary Mules, Arthur Wren Tuxford, Samuel George Webb, Hermann Wolfe, and Thomas Wooldman.

Doctor of Medicine for Practitioners of 15 years' standing.—Samuel Boake, Herbert Cooper Barnes, Henry Campbell, Thomas Moravian Carter, Henry Caudwell, William Thomas Davies, Thomas Arnold Durrant, Charles Hunter Graham, George David Edwardes Jones, Lewis Walter Pockett, Arthur Henry Poole, Ernest Graham Hamilton Williams, and Joseph Wilson.

Bachelor of Medicine (M.B.) and Bachelor of Surgery (B.S.).—Orrock Arnott, Herbert Ridley Crisp, Henry Glendinning Davison, Arthur Charles Greene, Isaiah Hodgkinson, Hedvig Christina Kellgren, Herbert Richard McAleenan, Frank Widowfield Melvin, Francis Aidan Robinson, Charles Frederick Morris Saint, Edward Davison Smith, and Basil Taylor, all of the College of Medicine, Newcastle-upon-Tyne.

Bachelor of Hygiene (B.Hy.).—William James Penfold, Robert Rutherford, and Charles Samson Thomson.

Diploma in Public Health (D.P.H.).—John Frederick Bridge, William Baron Cockill, William James Penfold, Robert Rutherford, and Charles Samson Thomson.

At the third examination for the degree of Bachelor of Medicine the following candidates satisfied the examiners:—

Pathology, Medical Jurisprudence, Public Health, and Elementary Bacteriology.—Honours (Second Class): John Robert Dunn Holthy, L.R.C.P. & S., L.F.P.S.G., Queen's College, Belfast. *Pass List:* Isaac Bainbridge, Helen Grace Clark, Robert Vickers Clayton, John Hare, Samuel Littlewood, and George Cuthbert Mura M'Conigle, College of Medicine, Newcastle-upon-Tyne; William Reynolds, L.D.S., Guy's Hospital and College of Medicine, Newcastle-upon-Tyne; Eric Hemingway Shaw, College of Medicine, Newcastle-upon-Tyne; Matilda Ann Sinclair, London School of Medicine for Women; and Stanley Worthington and James Carruthers Young, College of Medicine, Newcastle-upon-Tyne.

UNIVERSITY OF EDINBURGH.—The following degrees and certificates were conferred on July 24th:—

Doctor of Medicine.—†Thomas Addis, M.B., Ch.B., Scotland; John Allan, M.B., Ch.B., Scotland; Alexander Grant Anderson, M.A., B.Sc., M.B., Ch.B., Scotland; Henry Ernest Arbuckle, M.B., Ch.B., Natal (*in absentiâ*); John James Bennetts, M.B., C.M., England; Lawson Miller Cairns, M.B., C.M., Scotland; ‡Percival Douglas Cameron, M.B., Ch.B., New Zealand; David Allan Carruthers, M.B., C.M., British Guiana; George Clark Cathcart, M.A., M.B., C.M., Scotland; *James Walker Dawson, M.B., C.M., Scotland; ‡John Maxwell Dawson, M.B., C.M., Scotland; David Elliot Dickson, M.B., C.M., Scotland; ‡James Mollison Dickson, M.B., Ch.B., Scotland (with Second-class Honours); †James Herbert Dixon, M.B., C.M., England; Frederick Henderick Dommisse, M.B., Ch.B., South Africa (*in absentiâ*); John Russell Edward, M.B., Ch.B., Scotland; Henry Edwards, M.B., C.M., Wales; George Christopher Elliott, M.B., C.M., England; †Francis Wiremu Brian Fitchett, M.B., C.M., New Zealand (*in absentiâ*); Charles Forsyth, M.B., Ch.B., Scotland (*in absentiâ*); ‡Alexander Frew, M.B., Ch.B., Scotland; *Auckland Campbell Geddes, M.B., Ch.B., Scotland (with Second-class Honours); Alexander Gibb Glass, M.A., M.B., Ch.B., Scotland; †George Arthur Gordon, M.B., Ch.B., Scotland; John Edward Gordon, M.B., Ch.B., Scotland; Francis Charles Henry Grenier, M.B., C.M., Ceylon; George Gunn, M.B., Ch.B., Australia; John Thomas Harvey, M.B., C.M., Australia (*in absentiâ*); Edwin Henry Irwin, M.B., C.M., Ireland; Patrick Kinmont, M.B., Ch.B., Scotland; †Charles Damien Lochrane, M.B., Ch.B., Scotland; Alexander John M'Callum, M.B., C.M., Scotland; John Glen M'Caughey, M.B., Ch.B., Ireland; ‡Hugh Ross Macintyre, M.B., Ch.B., Scotland (with Second-class Honours); ‡Robert William Mackenna, M.A., M.B., Ch.B., Scotland; ‡Theodore Charles Mackenzie, M.B., Ch.B., Scotland; Murdo MacKinnon, M.B., Ch.B., Scotland; †Charles M'Neil, M.A., M.B., Ch.B., Scotland (with First-class Honours); †Thomas Gwynne Maitland, M.A., B.Sc., M.B., Ch.B., Wales; †William Mair, M.A., B.Sc., M.B., Ch.B., Scotland; †David Morley Mathieson, M.A., M.B., Ch.B., Scotland; *Edwin Matthew, M.A., M.B., C.M., Scotland (with First-class Honours); ‡Gordon Moncreiff Melville, M.B., Ch.B., Ireland; *Lindsay Stephen Milne, M.B., Ch.B., Scotland; Charles Robert Paterson Mitchell, M.B., Ch.B., Scotland; David Lyall Morrison, M.B., Ch.B., Scotland; *James Alexander Murray, B.Sc., M.B., Ch.B., Scotland; ‡James Elliot Murray, M.B., Ch.B., Scotland; Archibald Oliver, M.B., Ch.B., Scotland; ‡Ronald Graeme Scott Orbell, M.B., Ch.B., New Zealand; ‡John Lloyd Owen, M.B., C.M., Wales; Frederick Linny Pochin, M.B., C.M., England; Frederick William Price, M.B., C.M., England; Edward Thomas Pritchard, M.B., C.M., England; David Rorie, M.B., C.M., Scotland (*in absentiâ*); George Archibald Park Ross, M.B., Ch.B., Scotland (*in absentiâ*); William Joseph Burns Selkirk, M.A., M.B., Ch.B., Scotland; ‡John Thomson Shirlaw, M.B., C.M., Scotland; ‡Stanley Alwyn Smith, M.B., Ch.B., England; Eva Maud Cavanagh, *née* Snowball, M.B., Ch.B., England (with Second-class Honours) (*in absentiâ*); †Henry Speirs, M.B., Ch.B., Scotland; Eleanor Rosina Sproull, M.B., Ch.B., Ireland; Patrick Steele, M.B., Ch.B., Scotland; Roger St. Clair Steuart, M.B., Ch.B., New Zealand; ‡Halliday Gibson Sutherland, M.B., Ch.B., Scotland; Robert Greig Thomson, M.B., Ch.B., Scotland; ‡Thomas Lauder Thomson, M.B., Ch.B., England; Frank Edgar Wall, M.B., Ch.B., Australia; Henry Everley Arthur Washbourn, M.B., Ch.B., New Zealand (with Second-class Honours) (*in absentiâ*); Andrew Gordon Watson, M.B., Ch.B., Scotland; ‡Robert Honey Watt, M.B., Ch.B., Scotland; Martha Beatrice Webb, M.B., Ch.B., England; ‡David Percival Dalbreck Wilkie, M.B., Ch.B., Scotland; and ‡Hugh Cameron Wilson, M.B., Ch.B., Scotland.

* Awarded Gold Medals for their theses.
† Highly commended for their theses.
‡ Commended for their theses.

Bachelor of Medicine and Master in Surgery.—George Bidie, Major I.M.S., Scotland; Peter Murray Carlyle, Scotland; John Berkley Stewart, Ireland; and John Cook Tennant, M.A., Scotland.

Bachelor of Medicine and Bachelor of Surgery.—†Richard Charles Alexander, M.A., Scotland; Hamish Morton Anderson, Scotland; Marion Hamilton Archibald, M.A., Scotland; Margaret Winifred Bartholomew, Scotland; *Lydia Dorothy La Trobe Bateman, England; †Andrew Russell Bearn, England; James Black, Scotland; William Boyd, Scotland; Bernard Score Browne, Ireland; Elliott Arthur Brummitt, Australia; John Earnscleugh Brydon, England; Joseph Thompson Carson, Ireland; Louis Lawrence Cassidy, Ireland; Jean Gardner Cathels, Scotland; Duncan Gordon Cooper, B.A., India; Harry Slater Cormack, Scotland; Alexander Cosgrave Court, England; David Duncan Craig, M.A., B.Sc., Scotland; †James Crawford Craig, M.A., Scotland; Emilie Constance Creaser, Ireland; John Crocket, Scotland; John Milne Dalrymple, New Zealand; Francis John Davidson, Scotland; Purser Davies, Wales; James M'Gavin Deuchars, Scotland; Andrew Leslie Dykes, England; *John Findlay, Scotland; William Fleming, England; William Tyler Gardiner, Ireland; Thomas Gardner, Scotland; *Alexander Gibson, M.A., Scotland; Arthur Inglis Girdwood, Cape Colony; Robert Laurie Girdwood, M.A., Cape Colony; James Alexander Gordon, Scotland; †Peter Gorrie, Scotland; †John Charles Boileau Grant, Scotland; William Grant, Scotland; Francis

Wood Greaves, Barbados; *Joseph Godwin Greenfield, B.Sc., Scotland; James Oliver, Hamilton, Scotland; Robert Hannah, Scotland; †Frederick William Hay, India; Hester Morris Henderson, England; William Holden, England; John Dougall Ingram, Scotland; Kombur Krishnaswamy Iyengar, India; Francis Evelyn Jardine, Scotland; John Johnstone Jervis, Scotland; Hubert Edwyn Johnson, England; Jagannath Vasudev Karve, India; Robert Arno Krause, Germany; Robert Douglas Laurie, England; Henry Ruthven Lawrence, Cape Colony; Arthur James Bruce Leckie, India; Archibald Renwick Leggate, Scotland; Murdoch Alexander Lindsay, B.Sc., Canada; James Lorimer, Scotland; Joseph Currie Lorraine, Scotland; John Macdonald, Scotland; Robert Forrester Douglas MacGregor, Scotland; *Kenneth Mackenzie, New Zealand; Donald Robert Clarke Maclagan, Scotland; †William Mackenzie Macnab, Scotland; David Macnair, Scotland; Eric Reginald Delme Maconochie, Scotland; Alexander Cross Mallace, M.A., Scotland; *John Marshall, Scotland; Eva Meredith, New Zealand; Reinhard Carl Johannes Meyer, B.A., Cape Colony; James Alexander Mitchell, Scotland; John Barré de Winton Molony, Ireland; Flora Morrison, New Zealand; Katharine Beatson Arbuckle Nelson, Scotland; Isaac Adrian van Niekerk, Cape Colony; Alfred Clarence Norman, England; Hilda Margaret Northcroft, New Zealand; Arthur Bushby Pearson, New Zealand; John Henry Herbert Pearson, Scotland; John Harold Peek, Australia; Alfred Alexander Webster Petrie, England; Bernard Blair Phillips, England; Alfred Rees Price, Wales; Laura Williams Pugh, Wales; Charles Arthur Purnell, New Zealand; Khaja Abdul Rahman, India; Jacobus Janse van Rensburg, Cape Colony; Francis Esmond Reynolds, England; Charles Leonard Digby Roberts, England; *John Scott, Scotland; James Tudhope Simson, Scotland; John Thomas Simson, Scotland; Thomas Smyth, Ireland; †Waldemar Bartholin Sommers, New Zealand; †Joseph Edward Spence, England; Robert Anderson Spence, Scotland; John Wightman Stirling, South Africa; Adam Tait, Scotland; Arthur Edwin Tait, England; George Pritchard Taylor, Ireland; †John Gordon Thomson, M.A., Scotland; *John James Thomson, Scotland; Robert William Lang Todd, B.Sc., Scotland; Raymond Vérel, Scotland; Frederick Hendrik de Villiers, Cape Colony; Abraham Andrew Walbrugh, South Africa; Edward Archibald Walker, Scotland; Walter Oliphant Walker, Scotland; Herbert Smith Wallace, Scotland; David Rodolphe Philippe Walther, England; †Lancelot Edward Barrington Ward, England; John Ware, B.A., England; Frans Karel te Water, Cape Colony; Francis William Waterworth, England; †Alexander Pirie Watson, M.A., Scotland; †Hugh Ballingall Watson, M.A., Scotland; William Scott Watson, England; Herbert Lindesay Watson Wemyss, Scotland; Gordon Wilson, Scotland; Gerald Gage Wray, Ireland; Arthur Gurney Yates, M.A., England; and †William Allan Young, Scotland.

* Passed with First-class Honours.
† Passed with Second-class Honours.

Bachelor of Science in the Department of Public Health.—Edward Burnet, B.A., M.B., Ch.B.; and Alexander Leonard Duke, M.B., C.M.

The following Fellowships, scholarships, and prizes have been awarded :—

Gunning Victoria Jubilee Prize in Physiology, Thomas Addis, M.D., Ch.B.; Gunning Victoria Jubilee Prize in Practice of Physic, Charles M'Neil, M.A., M.D., Ch.B.; Ettles Scholarship, Alexander Gibson, M.A., M.B., Ch.B.; Allan Fellowship in Clinical Medicine and Clinical Surgery, Arthur Inglis Girdwood, M.B., Ch.B.; Freeland Barbour Fellowship, Joseph Godwin Greenfield, B.Sc., M.B., Ch.B.; Buchanan Scholarship in Gynæcology, Alexander Gibson, M.A., M.B., Ch.B.; James Scott Scholarship in Midwifery, Alexander Cross Mallace, M.A., M.B., Ch.B.; Mouat Scholarship in the Practice of Physic, Francis William Waterworth, M.B., Ch.B.; Stark Scholarship in Clinical Medicine, John Scott, M.B., Ch.B.; M'Cosh Graduate's and Medical Bursaries, John Marshall, M.B., Ch.B.; Beaney Prize in Anatomy and Surgery, John James Thomson, M.B., Ch.B.; Conan Doyle Prize, Jacobus Janse van Rensburg, M.B., Ch.B.; Dorothy Gilfillan Memorial Prize, Lydia Dorothy La Trobe Bateman, M.B., Ch.B.; Wightman Prize in Clinical Medicine, Alexander Ninian Bruce, B.Sc. (*Proxime accessit*—Edward Logie Middleton); and Pattison Prize in Clinical Surgery, Kenneth Fraser.

UNIVERSITY OF ABERDEEN.—The following degrees and diploma were conferred on July 22nd :—

Degree of Doctor of Science (*D.Sc.*).—Alexander Bowman, B.Sc., Aberdeen; and Alfred William Gibb, M.A., B.Sc., Aberdeen.

Degree of Bachelor of Science (*B.Sc.*).—George Crane, M.A., Aberdeen; James Argentine Littlejohn, Aberdeen; Alexander Morrison, M.A., Aberdeen; and William James Reid, Portgordon.

Degree of Doctor of Medicine (*M.D.*).—Adam Alexander, M.B., C.M., London; Ernest Barnes, M.B., C.M., Manchester; †Roderick Mackenzie Gunn, M.B., Ch.B., London; *Stewart Carlisle Howard, M.B., Ch.B., Mürthly; ‡James McIntosh, M.B., Ch.B., Aberdeen; †George Milne, M.B., Ch.B., London; Adam Steven Niven, M.A., M.B., Ch.B., Turriff; ‡Bertie Ronald Gordon Russell, M.B., Ch.B., Aberdeen; David Sivewright, M.A., M.B., Ch.B., London; and Cornelius Agnew Suvoong, M.A., M.B., Ch.B., London.

* Commendation for Thesis. † Honours for Thesis.
‡ Highest Honours for Thesis.

Degrees of Bachelor of Medicine (*M.B.*) *and Bachelor of Surgery* (*Ch.B.*).—William Stephen Angus, Strichen; William Minty Badenoch, Portsoy; William Bain, Aberdeen; James Gray Christie, Fochabers; William Youngson Davidson, Aberdeen; Richard Edward Flowerdew, Scole, Norfolk; David Stewart Garden, Newhills; Stephen Goodbrand, Aberdeen; George Forbes Hunter, Aberdeen; Peter Sinclair Hunter, Portlethen; Elizabeth Jane Innes, Skene; William Knox Irwin, Drumquin, County Tyrone; James Brown Macallan, Aberdeen: *William Gordon MacArthur, Brideswell, by Huntly; Farquhar MacRae, Inverness; Basil William Martin, Darley Abbey, near Derby; James George Muterer, Portgordon, Banffshire; William James Pirie, Buckie, Banffshire; David Ernest Rae, Aberdeen; William Benton Rennie, Milton, Fintray, Aberdeenshire; Alexander Robertson, Huntly; Kenneth Ross, M.A., Tain, Ross-shire; Alfred John Watson Stephen, Ellon; Walter Richards Stephen, Fraserburgh; Reginald Frank Twort, Camberley, Surrey; Ernest Walker, Aberdeen; John Henderson Will, Peterhead; Charles Coutts Wood, Torry; and James Henderson Yule, Lerwick.

Note.—Cuthbert Delaval Shafto Agassiz and Arthur Curzon Lindsay Smith have passed the Final Examinations, but will not graduate until they have attained the necessary age.

John Murray Medal and Scholarship (awarded to the most distinguished graduate (M.B.) of 1908).—James Watt, M.A., Wartle.

* Passed Final Examination with distinction.

Diploma in Public Health.—*William Scott Clark, M.B., Ch.B. Aberd., Ardersier; Alexander Noble, M.B., Ch.B. Aberd., Laurencekirk; Maurice Waugh Renton, M.D. Aberd., Dartford; Robert Williamson Asher Salmond, M.B., Ch.B. Aberd., Aberdeen; and Alexander William Overbeck-Wright, M.B., Ch.B. Aberd., Captain, I.M.S., Bengal.

* With credit.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Georg Joachimsthal, a nephew and pupil of Professor Julius Wolff, has been appointed Extraordinary Professor of Orthopædic Surgery and Director of the University Clinic, which posts were vacated half a year ago by the sudden death of Professor Hoffa. Dr. Joachimsthal won the Pourot prize of the French Academy of Sciences for his experimental researches on the functional changes in the shapes of muscles and he is editor of the *Zeitschrift für orthopädische Chirurgie.*—*Freiburg:* Dr. Karl Süpfle has been recognised as *privat-docent* of Hygiene and Bacteriology.—*Greifswald:* Dr. Joseph Forschbach has been recognised as *privat-docent* of Medicine.—*Halle:* Dr. Drigalski has been recognised as *privat-docent* of Hygiene.—*Harvard:* Dr. Franklin S. Newell has been appointed Assistant Professor of Midwifery and Gynæcology.—*Kharkoff:* Dr. J. V. Troïtski has been promoted to be Ordinary Professor of Children's Diseases, also Dr. J. Orshanski to be Ordinary Professor of Psychiatry and Neurology, and Dr. K. Georgievski to be Ordinary Professor of Therapeutics.—*Kiel:* Dr. Wassermeyer of Bonn has been recognised as *privat-docent* of Psychiatry.—*Marburg:* Dr. Römer has been appointed Extraordinary Professor of Experimental Therapeutics.—*Munich:* Dr. Lange has been promoted to be Titular Professor of Orthopædic Surgery.—*Naples:* Dr. Giuseppe Proto has been recognised as *privat-docent* of Laryngology.—*Rome:* Dr. Antonino Longo has been recognised as *privat-docent* of Children's Diseases.

DESTRUCTION OF MOSQUITOES.—Mr. C. Kenrick Gibbons has presented to the Zoological Gardens of London a large number of the small fresh-water fish from Barbados known as "millions" (*Gvrardinus poecilloides*). These little fish, which have been placed in a tank in the Tortoise House, are of special interest because of their supposed action in preventing malaria. Malaria is very much less common in Barbados than in other West Indian Islands and it has been suggested that this freedom is due to the presence of enormous quantities of the "millions" in the fresh-water pools. The little fish are very voracious and destroy large numbers of the larvæ of mosquitoes that spread malaria. The males are about half an inch long, with brilliant iridescent colours and large black spots on the sides. The females are considerably larger and less highly coloured. It is understood that experiments are going to be made with the introduction of these fish into tropical countries where malaria is prevalent.

MEDICAL MOVEMENTS IN RUSSIA.—In the Military Medical Department the metrical system of weights and measures is being introduced in the pharmaceutico-economical sections and in all the establishments for treatment. All medicines and medical stores required have now to be ordered in accordance with the metrical system, an alteration which has long been in contemplation.—A society has been formed for the study of cancer and its preventive treatment on the initiative of the Gynæcological (Accoucheurs) Society, the idea being to follow in the steps of several western towns. An institute exists for the study of cancer in Moscow relying upon private support, but St. Petersburg as yet lacks any systematic institution for the investigation of the problems of malignant disease.—In announcing that a Mr. M. P. Skoropadsky has given £2500 for the purpose of founding a clinical department for epileptics in St. Petersburg the *Novoe Vremya* observes that scarcely anything has been done in Russia for these unfortunates. This is all the more extraordinary and sad because it is calculated that in St.

Petersburg there are 50 epileptics to every 10,000 inhabitants. The number of epileptics in Moscow is calculated in round figures at 1000 and the total for all Russia is said to be 100,000.

THE Board of the Royal Waterloo Hospital wishes to record its thanks to a munificent and anonymous benefactor who has recently sent it £100, being the eighth occasion on which he has so generously assisted the charity.

DEATH OF AN EMINENT FOREIGN MEDICAL MAN.—The death of the following eminent foreign medical man is announced:—Dr. Karl von Than, professor of medical chemistry in the University of Budapest, aged 74 years.

PRESENTATION TO A MEDICAL PRACTITIONER.—At Petertavy (Devon) schoolroom on July 20th Mrs. W. H. Holmes, on behalf of the residents, presented Mr. Legh Richmond Marshall, L.S.A., with a silver fruit basket of filigree work as a mark of respect and esteem on the occasion of his leaving the neighbourhood.

SHOOTING AT A MEDICAL MAN.—Dr. G. W. Hamilton Cumming of Torquay a few days ago narrowly escaped serious injury or something worse. While he was bending over the child of a Russian gentleman the latter shot at him with a revolver and hit him in the back of the neck but the wound luckily was only slight. The assailant was arrested. It is supposed that he was completely distracted owing to the illness of the child.

UNIVERSITY COLLEGE, DUNDEE.—The following students of this medical school have completed their course and have just been awarded the degrees of M.B., Ch.B.:—David Gillespie, Charles Herbert Lilley, Alfred Graham Malcolm, William Moodie, William Thomson Munro (with distinction), Ernest Farquhar Murray (with distinction), Elizabeth Barclay Paisley (with distinction), Robert Stewart Park, and Harry Elliot Watson.

THE PEARN CONVALESCENT HOME, PLYMOUTH.—The annual meeting of the subscribers to this institution was held on July 23rd under the presidency of Vice-Admiral J. E. M. Wilson. It was reported that during 1907 there had been a record number of patients admitted—viz., 491—compared with 464 in 1906. The average stay of each was 18 days. The financial statement showed that the income amounted to £1717 and the expenditure was £1498.

LITERARY INTELLIGENCE.—Mr. H. K. Lewis has nearly ready for publication a new edition of "The Extra Pharmacopœia," by Mr. W. H. Martindale and Dr. W. Wynn Westcott. This will be the thirteenth and has been very thoroughly revised, quite a third of the book being entirely new matter and many new subjects being dealt with.—Messrs. Cassell and Co. announce a new volume for issue this week, entitled "Estimation of the Renal Function in Urinary Surgery," by Mr. J. W. Thomson Walker, M.B., C.M. Edin., F.R.C.S. Eng. The book forms a more extended discussion of the subject treated in the author's Hunterian lectures for 1907.

LIVINGSTONE COLLEGE.—The year-book of this institution for 1908 has just been published and can be obtained at the college, Leyton, E. Besides a record of the year's work at Livingstone College, it contains an account of students of the college in all parts of the world and a review of recent progress in tropical medicine. The year-book is embellished with a reproduction of a portrait of Dr. David Livingstone in the possession of the college. This college does good work in giving to missionaries sufficient medical knowledge to enable them to guard themselves from physical ills when working at stations far removed from qualified medical aid.

Dr. William P. Spratling, the builder, and for almost 14 years the medical superintendent, of the Craig Colony for Epileptics at Sonyea in New York State, has resigned his position to accept the professorship of nervous diseases and physiology at the College of Physicians and Surgeons, Baltimore, Maryland. Dr. Spratling will take up his new duties in Baltimore in October. In 1898 Dr. Spratling organised the National Association for the Study of Epilepsy in the United States, an association that now has an active membership of 100 and an associated membership of more than 300. It is doubtful if anyone has done more for the epileptic than Dr. Spratling, whose work at Sonyea has stimulated other States in America to provide public care for this class.

A DONATION of 500 guineas has been received by King Edward's Hospital Fund from the Prime Minister of Nepal.

THE BRITISH DENTAL ASSOCIATION.—The annual general meeting of the Western branch of the British Dental Association was held at Gloucester on July 24th under the presidency of Mr. E. L. Dudley (Bath). The financial statement was satisfactory, and it was reported that the branch now numbered 109 members. Mr. E. Goodman and Mr. H. B. Mason were elected auditors; Mr. J. Laws and Mr. T. A. Goard were appointed on the representative board in London; and Mr. E. Goodman, Mr. E. Apperly, Mr. S. J. Hayman, Mr. F. J. Hatton, and Mr. E. Benson were elected on the council.

MEDICO-LEGAL SOCIETY.—The second annual dinner of this society was held at the Holborn Restaurant on July 22nd, Mr. Justice Walton, the President, being in the chair. Among those present were Lord Justice Kennedy, Earl Russell, Mr. Henry Morris (President of the Royal College of Surgeons of England), Mr. Isaac Bradley (President of the Coroners' Society), Mr. R. D. Muir (senior counsel to the Treasury), Dr. F. W. Mott, F.R.S., Dr. F. W. Hewitt, Mr. J. Howell Evans, Mr. Harvey Murphy, Dr. F. J. Waldo, and many others. After the loyal toasts had been duly honoured Dr. Mott gave the toast "Law and Medicine," and pointed out the great advantage to be derived from the study of such subjects as lunacy by members of the legal and the medical professions in conjunction with one another. Lord Justice Kennedy, in responding on behalf of the legal profession, said that it was a great pleasure for one in his position to be present in an assembly of that kind. He noticed that there were more members of the medical than of the legal profession belonging to the society but he hoped that in years to come that difference would be altered and that both professions would be equally represented in that valuable society. He hailed with joy the bringing together of two professions in which those who worked knew that their education was thrown away unless they realised one great thing, the supreme importance of being quite sure of their facts before they came to their theories. He was not wrong, he believed, in speaking of that as the true view of the medical profession—he was quite sure it ought to be, and must be, the true view of his own. The people who brought everything to grief were those who had their settled theories, but when one came to the ordinary practice of life those theories were useless unless they got their facts right and could diagnose their position correctly. The common training in both of those branches must necessarily lead to the selection of the right kind of man to give useful facts. He supposed there were few lawyers who had had the advantage of a medical training and education, but whether they happened to train separately or not in these days of specialisation there was no doubt both professions would gain by learning something of the training and of the literary knowledge which the other must learn. Mr. Henry Morris replied on behalf of the medical profession and thought that the society might well take up the question of the unqualified practice of medicine in this country. He did not make the suggestion from any sense of trade unionism, which he abominated, but from a desire for the public good and the protection and welfare of the community. The toast of "The Medico-Legal Society" was given by Mr. Muir, and in reply the President said that the society discussed matters of interest, including practically all those on which a medical man was likely to be called upon to give evidence. During the year interesting discussions had taken place on the subject of the administration of anæsthetics and as to the relative rights and obligations of surgeons and anæsthetists and, he might add, patients. The very important question whether there ought to be legislation requiring some qualification for the anæsthetist had also been considered. Referring to the subject of inquests, the learned judge remarked that it was a serious question whether the law as it stood provided

adequately for the investigation into the cause of death where there was a doubt with regard to it. Mr. Bradley responded to the toast of "Our Guests," proposed by Earl Russell. Dr. Hewitt submitted "The Officers of the Society," which was replied to by Dr. Stanley B. Atkinson (the retiring secretary).—Previously to the dinner the society held its seventh annual meeting, Dr. W. Wynn Westcott (Vice-President) being in the chair. The report of the honorary secretaries, which was unanimously adopted, showed that the membership totalled 191, an increase of 40 during the year. The following officers were elected for the next session:—President: Mr. Justice Walton. Honorary treasurer: Mr. Walter Schröder. Honorary secretaries: Mr. Digby Cotes-Preedy and Dr. W. A. Brend. Additional members of the council: Dr. S. B. Atkinson, Mr. H. Sweeney, and Dr. F. S. Toogood.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Report of the Chief Inspector of Factories.

SEVERAL topics of interest to medical men are alluded to in the report of the Chief Inspector of Factories for the year 1907. It is stated that at the close of the year there were 2003 certifying surgeons, 115 of whom were appointed during the year. The report also shows that the subject of the industrial employment of women before and after childbirth has been engaging the attention of the Home Office. As the result of a conference at the Home Office in November arrangements have been made for the detailed inquiry on settled lines in a number of industrial communities with regard to the births in 1908. Distinction will be made between the women working in factories and workshops, those industrially employed at home, those otherwise employed outside as hawkers and charwomen, and those engaged in domestic duties only. The points with which the inquiry is to be concerned include such matters as age, the mode of feeding the child, and the social conditions of the household.

Irish Universities Bill.

The Irish Universities Bill has been read a third time in the House of Commons and has been sent up to the House of Lords. Two days were devoted to the report stage, and the third reading was carried at a Saturday sitting, on July 25th.—On Monday, July 27th, the Bill received a second reading in the House of Lords.

Poisons and Pharmacy Bill.

The Poisons and Pharmacy Bill was read a third time and passed by the House of Lords on Wednesday, July 22nd. There was no discussion on the Bill. The measure has still to pass the House of Commons.

The University of Durham Bill.

The University of Durham Bill has received a third reading in the House of Commons.—The Bill received a second reading in the House of Lords on Monday, July 27th.

The Medical Service of the Territorial Force.

Surgeon-General Sir A. H. KEOGH, the Director-General of the Army Medical Service, has made a report to the Secretary of State for War as to the progress made in constituting the medical service of the Territorial Force. The report has been issued as a parliamentary paper. In it Surgeon-General KEOGH acknowledges the aid which he has received "from these most patriotic men, the whole body of the medical profession." He discusses at length the duties which the medical service of the Territorial Force would be called upon to perform in time of war. When completed in the manner sketched out in his report, the medical arrangements for the army for home defence will consist of:—

(1) Sanitary and medical establishments of battalions under the officers commanding the battalions.

(2) Ambulances, under divisional and mounted brigade commanders, in the proportion of three field ambulances to a division and one cavalry ambulance to a mounted brigade.

(3) Sanitary companies for the sanitation of camps of concentration and similar camps under the local commanders.

(4) Administrative medical officers, with staff medical officer and sanitary officer, to coördinate and supervise the work of the above formations.

(5) Evacuation of sick and wounded from the field units to the general hospitals by road, rail, or water, under a line of communication, organisation in which the British Red Cross Society will play a large part.

(6) Establishment of general hospitals, under administrative officers of the Territorial Medical Corps with a staff of physicians and surgeons from the large civil hospitals in the locality, with a nursing staff from a Territorial Force Nursing Service with other subordinate *personnel* from the Territorial Force and voluntary aid societies, and with the preparation and equipment of the buildings undertaken by the British Red Cross Society.

(7) Convalescent homes organised by voluntary aid societies.

Tuberculosis Prevention (Ireland) Bill.

Mr. BIRRELL has found that it is impracticable to seek to get the Tuberculosis Prevention (Ireland) Bill through its Committee stage in the House of Commons in the fag-end of the summer session. Accordingly the necessary motion has been carried to send the Bill to a Standing Committee in the autumn session.

HOUSE OF COMMONS.

WEDNESDAY, JULY 22ND.

The Plague in India.

Mr. BUCHANAN (Under Secretary of State for India) in the course of the annual statement on the Indian Budget said: Plague has been a terrible calamity in India during the past 10 or 11 years. A few days ago several questions were put to me on this subject by honourable Members, and I gave to the House the figures for the current year with regard to it. They were of a fairly satisfactory character. Honourable Members rather demurred to my statement as to the first six months of the present year, and they asked how the figures compared with the first six months of last year month by month. Last year was an exceptionally bad year. The mortality in the first six months of 1907 reached 1,061,000. In the six months of the present year the mortality was 110,000 and the total number of deaths in the week ended July 11th in the whole of India from plague amounted to 435. The House should, of course, not be too hopeful. Although the figures are the lowest since 1899 there have been decreases before, and we have been disappointed in their continuation. The large decrease in 1906 was followed by the appalling figures of 1907. We must, therefore, possess our souls in patience and hope that we are passing by the worst of this dreadful plague. The honourable gentleman in the course of his speech mentioned that the Government of India had largely increased the expenditure on sanitary and medical services.

THURSDAY, JULY 23RD.

Ambulances for Street Accidents in London.

Mr. COOPER asked the Secretary of State for the Home Department whether the Departmental Committee appointed to consider the question of ambulances for street accidents in London had presented its report and when it would be issued.—Mr. GLADSTONE replied: I am informed that the committee is considering its report and hopes to present it in the autumn.

Mr. COOPER further asked whether the right honourable gentleman was aware that during the sitting of the Departmental Committee on London ambulances, litter ambulances amounting to more than 100 were placed in the streets of London; whether he would state by whose authority these ambulances were placed in the streets, how much was the total cost, and whether this cost would be a charge upon the rates.—Mr. GLADSTONE answered: A large number of litter ambulances have been placed in the streets by my authority. Some were authorised before the appointment of the committee, others since its sittings commenced. The cost of a wheeled litter with the appliances and shelter is £35 14*s.* 6*d.* This is defrayed out of the Metropolitan Police Fund.

The Notification of Tuberculosis in England and Wales.

Sir WILLIAM COLLINS asked the President of the Local Government Board in how many cases Parliamentary powers had been given to local authorities in England and Wales enabling them to require the notification of tuberculosis by medical men under penalty; whether such powers had been given in respect of tuberculosis of the lung only, or in respect of any form of tuberculosis; whether such powers had been given in any cases for more than a limited period of time; in how many cases had voluntary systems of notification of tuberculosis been adopted; and whether the results obtained under a voluntary system had compared favourably with those obtained under a compulsory system.—Mr. BURNS replied (by written answer): Parliamentary powers have been given in two such cases—viz., Sheffield and Bolton. In both cases the powers have been given in respect of tuberculosis of the lung only and for a limited period. I am aware of about 150 cases in which voluntary systems of notification of tuberculosis have been adopted or tried in England and Wales and there may possibly be others. It cannot, I think, be expected that in ordinary circumstances a voluntary system of notification will secure as early or complete notification of cases as will a compulsory system, and the preponderant experience in England and Wales appears to confirm this expectation.

MONDAY, JULY 27TH.

Medical Officers of Health and Home Office Returns.

Mr. RAMSAY MACDONALD asked the Secretary of State for the Home Department whether the administration of the home-work provisions of the Factory Act was discussed at a conference with medical officers of health at the Home Office last autumn, as promised in a reply to a question in the House on July 18th, 1907; and, if so, what results were arrived at.—Mr. GLADSTONE (by written answer) replied: Yes, sir, the conference was held as promised. A useful discussion took place on a number of administrative points and certain alterations and improvements were subsequently made in the tables issued to the medical officers for the preparation of the statistics. It may be hoped, I think, that the conference will have its result generally in an improved administration of the home-work provisions of the Factory Act.

Mr. RAMSAY MACDONALD further asked the right honourable gentleman whether his attention had been drawn to the second column in Table 6 of Part II. of the Supplement to the Annual Report of the Chief Inspector of Factories and Workshops for the Year 1906, where the number of lists of out-workers sent in by employers who fulfilled the legal obligation to send in two lists in the year were given separately from those who have sent in only one in the year; whether he had noticed that the numbers were, in many cases, odd and not even, in one case the number given being one; whether the same thing appeared in Table 5, which gave the details of the returns according to industries; and whether he could give any explanation why these apparent

mistakes had occurred.—Mr. GLADSTONE answered: I am aware of the figures to which the honourable Member calls attention. The figures have been tabulated as received from the medical officers of health. As explained in the introduction to the return issued in 1906 the department is unable to clear up by correspondence minor points of doubt that arise in connexion with these figures. The errors, which are not very important, are no doubt due to some misunderstanding on the part of the medical officers of health and the question whether the instructions as to filling up the tables can be made clearer will be considered before they are again issued.

Mr. RAMSAY MACDONALD also asked whether the attention of the right honourable gentleman had been drawn to the fact that in Glasgow no cases of out-work in infected premises were reported as having been found in the course of 3072 inspections of out-workers' premises, although the cases of infectious disease throughout the city were reported as being at the rate of 24 per 1000 of the population; and whether he had inquired if the places where home work was done in Glasgow were really as immune from infectious disease as a recent official publication seemed to show.—Mr. GLADSTONE replied: The figures in the returns were supplied by the medical officer of health of Glasgow, a most efficient and careful official, and I have no reason for doubting their accuracy. The question, however, of the prevalence of infectious disease in this or any other class of premises is a matter of public health, with which the Home Office is not directly concerned.

TUESDAY, JULY 28TH.

Medical Officers of Health and Home Office Returns.

Mr. RAMSAY MACDONALD asked the Secretary of State for the Home Department whether, in view of the apparent lack of uniformity in the reports of medical officers of health, he had considered the advisability of issuing a circular to local authorities informing them that they must include in the annual report of the medical officers of health to the Home Office all premises visited in connexion with infectious disease, provided home-work was found to be carried on.—Mr. GLADSTONE replied: I have no authority to issue the instructions suggested in the question, nor would they meet the case, as Sections 109 and 110 of the Factory Act do not apply to all kinds of home-work. The Home Office has done what it could to secure uniformity in the reports of the medical officers of health by issuing forms of tables but the use of the forms is not compulsory.

Mr. RAMSAY MACDONALD further asked the right honourable gentleman whether his attention had been drawn to the continued and increasing discrepancy between the total number of addresses of out-workers reported by medical officers of health as forwarded to other councils and that returned having been received by other councils; whether, according to the Home Office return, those reported as received were only 34,377, whilst 50,579 had been forwarded; and, if so, whether he would confer with the Postmaster General as to where the 16,202 missing lists had gone.—Mr. GLADSTONE answered: I am aware that the discrepancy between the number of addresses respectively forwarded and received by local authorities rose from 7350 in 1904, and 5300 in 1905 to over 16,000 in 1906. It will be seen on examination of the return that the increase is chiefly a London increase and probably the key to the problem lies here. I am not prepared to say positively what is the reason for it, but the increase, which cannot, I think, be accounted for as merely an increase in the fringe of out-workers outside London working for London employers, probably indicates a continuously increasing thoroughness on the part of London authorities in enforcing the Act, both in forwarding lists themselves and perhaps in searching the lists sent to them for duplicates of names already on their lists. It may be noticed especially that the City of London forwarded 14,376 addresses in 1906 as against only 3334 in 1904. I will consider the point further when the figures for 1907 are available.

Mr. RAMSAY MACDONALD also asked whether the attention of the right honourable gentleman had been drawn to Table 6 in Part II. in the Summary of Reports of Medical Officers of Health for 1906 to the Home Office, wherein it was shown that the number of names of out-workers received was greatly in excess of the number of inspections made in Stepney, Worcester, West Ham, Gloucestershire, and other places; whether representations were made last year about the places named; what steps he proposed to take in the case of these and others, such as Leeds, to bring the local inspection up to an efficient standard; and whether his attention had been drawn to the fact that Ipswich, about which similar representations were made regarding its neglect in 1905, had made no return at all for 1906; and what steps he proposed to take with that town.—Mr. GLADSTONE replied: I am aware of the figures in the return which has been issued by my directions. I would remind the honourable Member that in October, 1906, the Home Office issued a circular to local authorities (printed in the report of the Chief Inspector of Factories for that year) urging a more thorough enforcement of the home-work provisions of the Factory Act, and the figures in the return in question relate to a period before the issue of that circular. The above question will come up for consideration in connexion with the report of the Home Work Committee just issued.

Old Age Pensions and Medical Relief.

Mr. BENNETT asked the Chancellor of the Exchequer whether the recipient of an old age pension would, in case of necessity, be entitled to receive medical relief from a board of guardians.—Mr. LLOYD GEORGE replied (by written answer): Medical or surgical assistance supplied by or on the recommendation of a medical officer to the recipient of an old age pension would not disqualify him from continuing to receive his pension.

Hop Substitutes in the Brewing of Beer.

Mr. ESSEX asked the Prime Minister whether he proposed, upon the recommendation of the report of the Select Committee upon the Hop Industry, to bring in a Bill prohibiting the use of hop substitutes in the brewing of beer in this country.—Mr. LLOYD GEORGE (who answered on behalf of Mr. ASQUITH) furnished the following written reply: Yes, sir, it is in contemplation to prohibit by law the use of hop substitutes in the brewing of beer in the United Kingdom. A Bill for the purpose will be introduced at an early date provided general assent is secured to put it through during the autumn session.

WEDNESDAY, JULY 29TH.

The Tuberculosis Commission.

Mr. BURNS (the President of the Local Government Board) in the course of his reply to the discussion on the Local Government Board vote, said that the final report of the Royal Commission on Tuberculosis was in preparation. The inquiry had cost from £50,000 to £60,000 and had lasted for six or seven years. He had been pressed to extend the reference of the Commission but he was disinclined to do so. However, he was prepared to consider whether the farm and laboratory of Lord Blyth might be made the nucleus of a scheme of narrower scope and purpose than the Royal Commission.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

AHRENS, HENRY AUGUSTUS, L.R.C.P. Lond., M.R.C.S., L.S.A., has been appointed Medical Officer of Health of Basingstoke.

BOVEY, THOMAS W. W., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Factory Surgeon for the Horsmonden District, Kent, and District Medical Officer of Tonbridge Union.

CHALDECOTT, J. HENRY, L.R.C.P. Lond., F.F.P.S. Glasg., has been appointed Honorary Anæsthetist to St. Mary's Hospital, Paddington.

JOSEPH, A. HILL, M.D. Lond., has been appointed Certifying Factory Surgeon for the Borough of Bexhill.

LEEPER, BERTRAM C. A., L.R.C.P. & S. Irel., has been appointed Fourth Medical Officer at the Kent County Lunatic Asylum, Barming.

PINNIGER, LUCY, M.B., Ch.B. Glasg., has been appointed Assistant Schools Medical Officer for Oldham.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BOOTLE GENERAL HOSPITAL, Derby-road, Bootle.—Junior Resident. Salary £80 per annum, with board and laundry.

BRISTOL ROYAL INFIRMARY.—Resident Junior House Surgeon and Resident Casualty Officer, each for six months. Salaries at rate of £50 per annum, with board, lodging, and washing. Also Medical Registrar and Honorary Assistant Anæsthetist.

BUXTON, DEVONSHIRE HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with apartments, board, and laundry.

CANTERBURY, KENT AND CANTERBURY HOSPITAL.—House Surgeon, unmarried. Salary £90 per annum, with board and lodging.

CARDIFF, UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.—Assistant Lecturer and Demonstrator in Physiology.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistants.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Junior House Surgeon. Salary £60 per annum, with board, apartments, and laundry.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—House Physician for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

DEVONPORT, ROYAL ALBERT HOSPITAL AND EYE INFIRMARY.—Assistant Resident Medical Officer, unmarried, for six months. Salary at rate of £50 per annum, with board, lodging, and laundry.

EXETER, WONFORD HOUSE HOSPITAL FOR THE INSANE.—Assistant Medical Officer. Salary £200, rising to £250 per annum, with board, &c.

HALIFAX, ROYAL HALIFAX INFIRMARY.—Third House Surgeon, unmarried. Salary £80 per annum, with residence, board, and washing.

HAMPSHIRE COUNTY COUNCIL.—Two Assistant County Medical Officers of Health. Salary £250 per annum and allowances.

HARRIS PARISH.—Medical Officer. Salary £126 and house.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.—Assistant House Surgeon for six months. Salary £20, with residence, board, and washing.

HEREFORD, CITY OF.—Medical Officer of Health. Salary £500 per annum.

IPSWICH, EAST SUFFOLK AND IPSWICH HOSPITAL.—House Surgeon. Salary £65.

ISLE OF ELY EDUCATION COMMITTEE.—Medical Inspector of School Children. Salary at rate of £250 per annum.

KIRKBURTON, NEAR HUDDERSFIELD, STORTHES HALL ASYLUM.—Locum Tenens for two months. Salary £3 3s. per week, with board, lodging, and attendance.

LITTLE BROMWICH, CORPORATION OF BIRMINGHAM CITY (FEVER) HOSPITAL.—Assistant Medical Officer. Salary £120 per annum, with board, residence, &c.

LONDON THROAT HOSPITAL, 204, Great Portland-street, W.—House Surgeon, non-resident, for six months. Salary at rate of £50 per annum.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY.—Resident House Surgeon. Salary £100 per annum, with rooms, attendance, board, and washing.

MAIDSTONE, WEST KENT GENERAL HOSPITAL.—Assistant House Surgeon, unmarried. Salary £60, with board and lodging.

MANCHESTER, ANCOATS HOSPITAL.—Resident House Physician. Salary £80 per annum, with board, residence, &c.

MANCHESTER CHILDREN'S HOSPITAL, Gartside-street.—Assistant Medical Officer (non-resident). Salary £100 per annum.

MILLER GENERAL HOSPITAL FOR SOUTH-EAST LONDON, Greenwich-road, S.E.—Junior House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and laundry.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead.—Junior Resident Medical Officer. Salary £50 per annum, with board, lodging, &c.

NATIONAL SOCIETY FOR THE PREVENTION OF CRUELTY TO CHILDREN, Leicester-square, W.C.—Medical Inspector. Salary £200 per annum, rising to £300.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Third Resident Medical Officer. Salary £60 per annum, with board, residence, and laundry.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—House Physician and Two House Surgeons for six months. Salaries at rate of £80 per annum, with board, residence, and laundry.

ST. GEORGE'S HOSPITAL.—Resident Anæsthetist. Salary at rate of £100 per annum, with board and lodging.

ST. LUKE'S HOSPITAL FOR MENTAL DISEASES, Old-street, London.—Clinical Assistant, unmarried, for six months. Board, apartments, and washing provided.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.—Senior Resident Medical Officer, unmarried. Salary at rate of £100 per annum, all found. Also Assistant Resident Medical Officer, unmarried. Salary at rate of £80 per annum, all found.

SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician. Salary £50, with board, lodging, and washing.

SINGAPORE TOWN MUNICIPALITY, STRAITS SETTLEMENTS.—Assistant Municipal Health Officer. Salary $4200, rising to $4800.

SOUTHAMPTON, COUNTY BOROUGH OF.—Assistant Medical Officer of Health. Salary £300 per annum.

TEIGNMOUTH HOSPITAL, SOUTH DEVON.—House Surgeon. Salary £70 per annum, with board, lodging, and washing.

WAKEFIELD, WEST RIDING OF YORKSHIRE COUNTY COUNCIL.—Assistant Medical Officer. Salary £300 per annum.

WEST HAM UNION INFIRMARY, Whipps Cross-road, Leytonstone, N.E.—Junior Assistant Medical Officer (female). Salary £100 per annum, with residential allowances.

WEST LONDON HOSPITAL, Hammersmith-road, W.—Two House Physicians and Three House Surgeons for six months. Board, lodging, and laundry allowance provided.

THE Secretary of State for the Home Department, Whitehall, S.W., gives notice of a vacancy as Medical Referee under the Workmen's Compensation Act, 1906, for County Court Circuit No. 7, attached more particularly to Birkenhead and Runcorn County Courts; and the Chief Inspector of Factories gives notice of a vacancy as Certifying Surgeon under the Factory and Workshop Act at Pontardawe, in the county of Glamorgan.

Births, Marriages, and Deaths.

BIRTHS.

DOUGLAS.—On July 23rd, at Wood-street, Walthamstow, the wife of Kenneth Harington Douglas, M.R.C.S., L.R.C.P., of a daughter.

SMITH.—On July 25th, at Cambridge-road, Seven Kings, Essex, the wife of Julius H. Smith, M.R.C.S., L.R.C.P. Lond., of a daughter.

SWETE-EVANS.—On July 22nd, at Malvern Lodge, Southport, the wife of W. B. Swete-Evans, M.A., M.B., of a daughter.

MARRIAGES.

CRAWFORD—PRINGLE.—On July 25th, at Adelaide-road Presbyterian Church, Dublin, Henry M. L. Crawford, M.D., to Muriel, youngest daughter of the late J. Pringle, Esq., of Clones, co. Monaghan, Ireland.

DEATHS.

ARROL.—On July 23rd, at Connaught-square, Hyde Park, London, Charles Arrol, M.D., C.M., L.R.C.S. Edin., aged 61 years.

JONES.—On July 25th, at St. David's, Pembury, Kent, John Talfourd Jones, M.B. Lond., M.R.C.S., late of Brecon, South Wales, after years of illness borne with much fortitude, aged 71.

STEVENSON.—On July 27th, at Sandhurst Lodge, Streatham, Sir Thomas Stevenson, M.D., F.R.C.P., aged 70 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

AN ACTION FOR LIBEL IN BARBADOES.

Mr. Frederick G. W. Deane, F.R.C.S. Edin., of Barbadoes, has forwarded to us a file of the *Barbadoes Agricultural Reporter* containing a verbatim account of the trial of an action for libel which he brought recently against the proprietor and editor of the *Weekly Illustrated Paper*, published in the same island. The alleged libel consisted of one of a series of articles, intended to be humorous, written in West Indian negro dialect and entitled "Lectures by Cuffie de Poole." The offending "lecture" referred in thinly veiled terms to the plaintiff's professional connexion with certain events which had recently caused much interest in the island. It cast discredit upon the medical evidence which he had given during the course of an inquest upon a boy who had died from shock following rupture of the intestines. As the result of that evidence a Commission had been appointed to inquire into the treatment which the boy had received at the General Hospital. The Commission had exonerated its medical officers from any imputation of lack of care or skill in their conduct of the case. In the course of its inquiry it submitted Mr. Deane to an exhaustive examination upon the professional opinions which he had expressed at the inquest. Whilst this examination was in progress the defendant in the libel action published the "Lecture by Cuffie de Poole," which Mr. Deane, the plaintiff, alleged was a libel in that it held him up to ridicule and contained statements damaging to his professional reputation. The defence called no witnesses but relied on the arguments of Mr. Clarke, Solicitor-General, that the article contained only fair comment on a matter of public interest. The trial lasted for eight days. In the course of his summing up Chief Justice Greaves said: "The sole cause of contention in this case and the cause of the appointment of the Commission was this: the hospital doctors held a consultation over this boy and expressed the opinion that it was better to wait as they saw no symptoms that would justify an operation. On the other hand, Dr. Deane, when he was before the coroner, said that it was very easy to diagnose a rupture of the intestines—from which this boy died—and that he thought an operation should have been performed at once in this case and that he would have operated immediately and would not have waited for symptoms. Therefore, it is a matter of very great public interest whether when a person is taken to the hospital with a history that something has run over him he should be operated upon at once without waiting for symptoms, or whether it would not be wiser in the long run to wait for symptoms." His lordship subsequently referred to the humorous and satirical comments of *Punch* and other periodicals upon public affairs. The jury returned a verdict for the defendant, adding that they were of opinion that the writer went rather far in making the comments which he made. Having read the article in question, which is couched in somewhat unintelligible dialect, we incline to a like opinion. Mr. Deane has our sympathies. It is not pleasant to be lampooned, but in some circumstances it would appear more expedient to adopt a policy of dignified silence under such provocation than to appeal to the protection of the law.

EIGHTEENTH CENTURY MEDICAL SOCIETIES.

A CORRESPONDENT writes in answer to the inquiry for information under this title last week: "The numerous medical papers in the early numbers of the Philosophical Transactions; the Medical Transactions of the College of Physicians, 1785–1820; the Medical Observations by a Society of Physicians in London, 1776–84; Edinburgh Society of Physicians' Commentaries, 1774–86–95; Medical Society Laws and Regulations, 1784, and their Memoirs, 1792–1805; Royal Medical Society of Edinburgh, 1746; Students' Society there, 1772; and the Manchester Literary and Philosophical Society, 1789–1802. These seem the obvious references. In the library at 20, Hanover-square is a manuscript scheme for constituting a Society of Physicians, 1782; at Exeter there was a good library and at Bristol, both of which, I expect, began before 1800; and there is a good old medical library at Manchester and one at Lancaster, but I do not know their date. The *London Medical Review* began 1799 and the *Edinburgh (Duncan) Annals of Medicine* in the same year; the *Medical and Chirurgical Review* (edited by Clutterbuck) appeared in 1795. Most of the other extant journals began after 1800."——From another correspondent we have received the following: "An interesting account of the medical societies of the eighteenth century, with a full bibliography, was given by Dr. G. Newton Pitt in his Hunterian oration at the Hunterian Society on Feb. 13th, 1896 (THE LANCET, May 9th, 1896, p. 1270). In addition the printed catalogue of the library of the Royal Medical and Chirurgical Society under the heads, 'Transactions' and 'Journals,' should be consulted. For still greater completeness the catalogue of the British Museum, under heads 'Academies' and probably under 'Journals,' might be referred to. A visit to the library of the Royal College of Surgeons of England to inspect their copious catalogue of Journals and Transactions might also be recommended. The library of the Royal College of Physicians of London contains a good many similar journals and transactions, but is not so complete, and all

large medical libraries would yield similar information."——A third correspondent writes: "In a footnote at page 4 of the *London Medical Repository, Monthly Journal, and Review*, No. 7, July 1st, 1814, it is stated that the earliest periodical publication in this country 'appropriated entirely to Medicine was the *Bibliotheca Anatomica, Medica, et Chirurgica*, which came out monthly and went to the extent of three quarto volumes.' As the date is not given the statement is annoyingly inadequate. Timperley, in his useful but defectively indexed 'Encyclopædia of Literary and Typographical Anecdote' (1842) has the following bald entry: '1774. *Jan. The Medical Magazine.* No. 1.'"——A fourth correspondent writes: "Eleven volumes appeared between 1781 and 1790 of *The London Medical Journal* by a Society of Physicians. It was continued as *Medical Facts and Observations.*

RETENTION OF A PESSARY.

To the Editor of THE LANCET.

SIR,—I do not attempt to point any lesson or deduce any moral from the following incident. An elderly woman consulted me for an offensive vaginal discharge of a year's duration, accompanied lately by considerable hæmorrhage and pain. Her impression was that she was rapidly failing in health and when I made an appointment to examine her I had little doubt that I should have an unfavourable story to tell. Judge of my surprise when I discovered a large ring pessary, very much the worse for wear. The patient's astonishment was equal to mine and evidently she had no knowledge of it. Her explanation was that over six years ago she was examined, without an anæsthetic, at a leading London hospital and that the pessary must have been introduced then without her being aware of the fact. Thus for six years, all unconsciously, she has been wearing this instrument. I may say that the woman is particularly intelligent and not at all neurotic.

I am, Sir, yours faithfully,

E. F. O'FERRALL, L.R.C.P. Lond.

A MIDWIFE CENSURED.

Charlotte Bradford, a registered midwife, was censured by the Brighton coroner (Mr. Bush) at an inquest at the Brighton workhouse on July 24th. On July 16th the midwife was called to a case of a woman named Doreri. Three days' later Doreri became seriously ill and was taken to the workhouse infirmary where she died from puerperal septicæmia. Dr. Douglas M. Ross, medical officer of the workhouse, said that the condition of the deceased was accounted for by the fact that on July 13th, three days prior to having been called to the case of Doreri, the midwife had laid out a child who had died from erysipelas. Dr. Ross said that he had never known so many cases of puerperal fever as had come under his notice at the workhouse within the last year or two. In each case a midwife had attended. It was most serious for midwives to lay out dead bodies. The coroner said that Mrs. Bradford's conduct was most serious, especially as there had been a previous similar case, and no doubt representations would be made to the Midwives Board in London. The coroner added that he had ascertained that Mrs. Bradford was not an examined and certified nurse, but was registered because she was a midwife at the time of the passing of the Act.

A CASE OF PERSISTENT SWEATING.

To the Editor of THE LANCET.

SIR,—Could any brother practitioner suggest any treatment likely to relieve a patient suffering from flushing followed by profuse sweating? Talking, eating, drinking, or the slightest exertion brings it on. The consequence is she is practically wet through all day and in the night. She is about 57 years of age. Two years ago she had an attack of double pneumonia, and as her heart was weak she nearly succumbed, but finally pulled through, and has been suffering more or less from these sweats since. The bases of the lungs even now, in spite of treatment, are not quite normal. Any suggestion likely to afford relief would be much appreciated.

I am, Sir, yours faithfully,

QUÆRENS.

PURE AIR FOR INDOOR WORKERS.

UNDER this title Dr. Thomas Glover Lyon read an interesting paper at the recent meeting of the Royal Sanitary Institute at Cardiff, in the course of which he made an amusing onslaught on the hygiene of congresses. As he was reading his paper at the annual congress of a society devoted to the advancement of hygiene he pointed out that everything connected with the congress should be an object-lesson of hygiene. He added: "When, however, I call to mind my experiences of congresses, such as the present, I find them irresistibly associated with hot and stuffy rooms. Exhibition buildings are almost always hopelessly bad from a hygienic point of view. Here, again, it must be remembered that it is the exhibition hands who go about the country from exhibition to exhibition that suffer, not the members of the congress who occasionally visit the exhibition. The same applies to other places of employment, for instance, restaurants. A City man usually snatches a hasty luncheon and returns to his office, but the waiters and other servants spend the whole day in the atmosphere of the restaurant. I once suggested to a proprietor of a City restaurant that, if good ventilation were provided, his customers would be able to smoke without annoying their neighbours. His answer was, 'We do not want them to smoke, we want them to eat their lunch and go.'" After summarising the effects of bad air upon all classes of workmen Dr. Lyon came to the conclusion that although many of the more enlightened employers of labour are taking steps in the right direction, competition appears to render it hopeless to look for a remedy except by legislation. "Nor can it," he says, "be expected that a good result will be obtained by tinkering up old methods; the whole question must be reconsidered. In the first place, any regulations as to floor space and area of inlets must fail to meet the case. Regulations must be made to insure a proper amount of air at a suitable temperature passing through the rooms where workers are employed; and this air must be properly distributed."

SWEATING BATHS.

A MEDICAL correspondent writes:—"The value of the Turkish bath to many persons in many conditions is well known to all medical men and the ventilation of such baths is a most important matter. I have recently thoroughly examined the system of ventilation of Constantine's Turkish Bath Establishment in Oxford-street, Manchester, and the result may be worthy of notice in your columns. The fresh-air supply is drawn directly from the open air by shafts and is then heated by being brought into contact with the outside of two convoluted stoves in a brick chamber. The hot air is then carried to the different bath-rooms, each of which has its special and separate hot-air supply-shaft. Afterwards the used-up air is extracted from each bath-room by a separate 'foul-air extractor flue.' Each of these foul-air flues opens directly into the great chimney and the used-up air is conveyed to the outer air high above the roof. The ventilation is continuous day and night. In addition to the Turkish baths there is a 'special sweating bath,' in which, by means of an arrangement whereby steam is admitted to a chamber wherein the air has been previously warmed, sweating is produced at a much lower temperature than in the ordinary Turkish bath. Usually a temperature of 120° F. is found sufficient for this purpose. This is a modification of the ordinary Turkish bath which may be of considerable service in some cases. There are also sulphur vapour baths and a mercurial bath, the direct utility of which is obvious."

AN ANTISEPTIC TELEPHONE CAP.

As we mentioned last week, our references to the dangers of the public telephone have stimulated inventors to send us suggestions and samples of their inventions. From the London Scottish Electrical Company, of 67, Leadenhall-street, London, and 235, High Holborn, we have received a "Blake Microtector Antiseptic Telephone Cap," which takes the form of a false rim for the telephone mouthpiece, with a perforated diaphragm filling up the annular space. The cap is constructed of a material resembling vulcanite but is much more tough. Upon one or both sides of the diaphragm can be placed a disc of a buckram-like fabric. This fabric is impregnated with a special antiseptic fluid supplied by the manufacturers. The price of the caps is 21*s.* per dozen, and sufficient pieces of fabric are supplied to last 12 months. An advantage of this invention is that being small it can be easily carried in the pocket, and any person can thus use his or her own "cap." The caps are made to fit the P.O. and N.T.C. mouthpieces and if used according to instructions should serve a useful purpose. It is hardly necessary to point out that all inventions of this kind constructed on the principle of a periodical renewal of an antiseptic depend for their efficiency on routine attention, and in the bustle of modern business life sanitary precautions unfortunately are sometimes sacrificed to the imperious demands of time. Could not the necessities of the case be met by providing each public call office with some kind of aseptic paper mouthpiece which could be used by each individual and afterwards destroyed?

VULNOPLAST.

WE have had brought to our notice by the Liverpool Lint Company (Mark-street Mills, Netherfield-road North, Liverpool) a new dressing termed "Vulnoplast," which, we are informed, is growing in popularity in Germany. The dressing is likely, we think, to find favour in Great Britain, in consequence of its convenience. It consists of strips of gauze properly backed and treated with any required antiseptic of the usual strength, and is supplied in various widths and lengths, from one and a half inches to four and three-quarter inches wide and from half a yard to five and a half yards long, put up in tin boxes. It is obvious that such a dressing might be very largely used in a surgeon's private practice.

Pharmacist.—We agree with every word of our correspondent's interesting letter and we have already undertaken, in some such way as suggested, the analysis of many of these remedies. The victims of the extortions of quacks do not, however, read the columns of THE LANCET, so that they do not benefit by our warnings.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 30th, 1908.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
July 24	30·08	S.W.	...	127	83	61	63	67	Fine
,, 25	29·94	S.E.	...	117	77	64	64	69	Overcast
,, 26	30·13	S.W.	...	120	77	58	60	63	Fine
,, 27	30·15	S.W.	...	123	78	55	60	64	Fine
,, 28	30·17	N.	...	119	74	62	61	67	Fine
,, 29	30·43	N.	...	121	75	57	59	65	Fine
,, 30	30·38	S.W.	...	120	79	59	60	65	Fine

Medical Diary for the ensuing Week.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, road, W.

TUESDAY.—10 A.M., Dr. Moullin: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Dr. Davis: Diseases of Throat, Nose, and Ear. 2.30 P.M., Operations. Dr. Abraham: Skin Diseases.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Dr. Scott: Diseases of the Eyes. 2.30 P.M., Operations. Dr. Robinson: Diseases of Women.

THURSDAY.—2 P.M., Medical and Surgical Clinics. X Rays. Mr. Dunn: Diseases of the Eyes. 2.30 P.M., Operations.

FRIDAY.—10 A.M., Dr. Moullin: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Dr. Davis: Diseases of Throat, Nose, and Ear. 2.30 P.M., Operations. Dr. Abraham: Skin Diseases.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Dr. Scott: Diseases of the Eyes. 2.30 P.M., Operations. Dr. Robinson: Diseases of Women.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), West London (2.30 P.M.).

TUESDAY (4th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.).

WEDNESDAY (5th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan 9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.).

THURSDAY (6th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M.).

FRIDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.) Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.).

SATURDAY (8th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index to Vol. I. of 1908, which was completed with the issue of June 27th, and the Title-page to the Volume, were given in THE LANCET of July 4th.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1908 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

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SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and Agents are authorised to collect, and generally do so collect, from the Proprietors the cost of such extra postage.

During the week marked copies of the following newspapers have been received:—*Scotsman, Edinburgh Evening Dispatch, Morning Advertiser, Standard, Daily News, Daily Express, Liverpool Daily Post, Scientific American, Blackburn Telegraph, Sheffield Telegraph, Evening Standard, Glasgow Herald, Wimbledon Gazette, Brighton Argus, Leeds and Yorkshire Mercury, Warrington Observer, Dublin Mail, Pall Mall Gazette, Bradford Observer, Literary Digest (New York), Army and Navy Gazette, &c.*

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I.—The Imperial News Agency, Lond.; Illinois State Board of Health, Springfield, Secretary of; Miss Eisle M. Inglis, Edinburgh.

J.—Mr. M. Talfourd Jones, Pembury.

K.—Dr. F. Khoury, Beyrouth; Dr. Robert Knox, Lond.; K. L. S.; Dr. H. Cameron Kidd, Bromsgrove; Messrs. R. A. Knight and Co., Lond.

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